

PULP & PAPER INDUSTRY

JUNE 1944



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Covering North America's
Wood Pulp, Paper and
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FOREST MANAGEMENT

Editorials

OF great importance to the pulp and paper industry is a recent survey by the National Lumber Manufacturers Association which shows a steady improvement in the management practices of U. S. forest owners.

Forest culture is a science in which small, as well as large, owners of timber stands should become more interested. There are great areas in the Pacific Northwest which are being recognized as not particularly suitable to agriculture. On the other hand, these areas are remarkably suited for tree-growing. The increasing scarcity of pulpwood and other timber stands should speed up the return of these lands to the growth of timber.

The NLMA survey of 37 principal wood-producing states discloses that 89.3 per cent of 345,600,000 acres of privately owned timberland reported from these states is growing new crops of timber in the wake of past harvests. This area includes both farm woodlands and industrial forests.

For 153,230,000 acres reported as owned or operated by the forest industries, the survey showed 93.7 per cent were growing new crops, leaving only 6.3 per cent as an area not now productive. Seven years ago, a survey of 202,000,000 acres of industrial and non-farm forest lands, made by the U. S. Forest Service found only 81.8 per cent was growing new timber.

Rayon Textile Monthly recently commented that this report is of special interest to its readers. Most rayon today is produced from wood pulp. Our contemporary magazine said:

"The report shows that one acre out of every three acres of the country is of forest land. Since the rayon industry depends more than ever on wood (rather than cotton linters), it should interest us immensely, especially with other shortages so imminent."

Other important reasons why it should interest the rayon industry is the fact that much more wood cellulose can be grown in a given acre than cotton linters. Rayon made from wood pulp is not only cheaper but offers greater uniformity in fibers and other advantages.

We are making progress in both the United States and Canada toward the ideal goal when total growth in the forests each year should equal or excel the total volume of wood harvested, or lost by fire or disease.

THE DRAFT AND THE INDUSTRY

ON the whole, the pulp and paper industry has been treated fairly by the selective service boards in the United States.

Perhaps the industry itself must accept some of the blame for the fact that the general public—including some of the personnel on these draft boards—is not aware of the fact that one-half of the entire paper output is now going overseas as packaging for machines, foods, etc.; that most medium and big guns are fired by treated wood pulp, that pulp goes into tire cord, rayon, etc., and that paper itself has hundreds of other essential uses. But failure of Washington agencies to issue more specific directives to draft boards regarding the essentiality of paper, wood pulp and pulpwood is unfortunate.

On the Pacific Coast, all the regional manpower directors have specifically designated the industry as essential. Most local draft boards deal with the industry and with loggers in the same manner as the aircraft industry, that is, as a prime essential industry.

Now Selective Service is going to draw only younger men. This may have an adverse effect on logging and pulpwood cutting. But, points out Ted Tinker of the American Paper & Pulp Association, the mills themselves will not be too hard hit.

A survey (covering 70 per cent of employes of APPA mills) shows 73% are males over 37 or females. Now 18% are women, compared to only 10% a year ago.

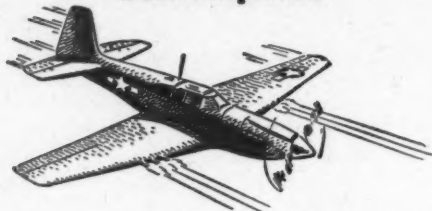
Only 5¼% are men under 26 years of age—the group now being called in the draft.

The high percentage of older men in the pulp and paper industry is a tribute to its stability and attractiveness. It indicates that the industry offers steady, interesting work with opportunity for advancement.

WEST COAST PULP LOGS PACK A WALLOP

European Invasion Accelerates Demand for Nitrating Pulp

Sixty Per Cent of Army's Smokeless Powder Manufactured from Pulpwood



A step in the manufacture of smokeless powder

THE invasion of Europe from the west, which began on June 5, bringing liberation to that continent, has greatly accelerated consumption of smokeless powder made from wood pulp.

This is because of the greatly increased participation in the war by the slogging but important infantryman, and also by artillery. The medium range calibers of weapons are the great users of smokeless powder but now big guns are becoming big consumers. Machine guns, A-A guns have been important consumers.

Two big western pulp mills are given over entirely to production of this special pulp. In the United States, all of this pulp is produced in the far west and in Canada it is produced by both eastern and west-

ern mills.

The mills which have gone into this production have lost paper mill customers of long standing for at least the duration, sacrificing sales campaigning benefits of many years' build-up. But, of course, this factor cannot be considered in the war emergency.

Word has been received by Pacific PULP & PAPER INDUSTRY that pulp allocations by the U. S. War Production Board in the third quarter are seriously complicated by the increased demand for sulphite for munitions manufacture, a heavier tonnage being needed for Army and Navy requirements for big gun ammunition.

In Pacific PULP & PAPER INDUSTRY, November, 1943, p. 13,

Hercules Powder Co. gave credit to Rayonier Incorporated, Soundview Pulp Co., and Weyerhaeuser Timber Co. for having "developed a standard grade of wood pulp in a special size suitable for the experimental work" when this type of pulp was being developed.

Army Requirements

● Back in the days before gunpowder was invented an invading army used battering rams of sturdy oak to force their way into fortified cities. Today the technique is different, but a tree is still used—in the form of smokeless powder.

Smokeless powder made of pulpwood is used in the bombs that pound Berlin, the naval guns that silence Jap shore defenses in the Pacific, and the machine guns which thin the Nazi ranks in Italy. Army requirements in 1944 call for 60 per cent of its smokeless powder to be manufactured from pulpwood. One cord

CONCERNING OUR COVER PICTURE

● On the cover is shown a magnified pin-hole in a tightly formed sheet of tissue. The pin-hole is actually only .0145 mm. in diameter. But it is magnified 500 times in the cover picture.

With the active support and encouragement of the U. S. Army and Navy, technicians in the pulp and paper industry are carrying on exhaustive studies and experiments in efforts to eliminate such defects as these pin-holes and to perfect new types of overseas packaging materials with high resistance to vapor permeability.

This has become one of the most important experimental activities of the industry because of increasing use of paper packaging for mechanical parts and foods being shipped overseas.

In cases of certain light inner-wraps of vapor-proof nature for overseas shipping of small mechanical parts, carbonizing and like papers, pin-holes are a major factor influencing permeability and efficiency of the finished product.

A great part of overseas shipments are to war zones in tropical, humid climates or to unusually damp northern regions. Therefore, proof against vapor permeability is necessary.

Such localized areas as are shown in this microphoto of a pin-hole may be caused by several reasons such as entrained air, flocculation, dirt particles, improper stock preparation, etc., which causes failure of the fibers to interlock in a tight mat at the time of formation.

The tissue pictured on the cover is a 15-lb. sheet of unbleached sulphite paper. The microphoto-graph was taken with equipment at the Fernstrom Paper Mills, Inc., of Pomona, Calif., makers of fruit and vegetable wraps and wrapping tissues and paper specialties for military, lend-lease and other wartime uses.

of pulpwood (360 ft.) will make enough smokeless powder to fire 90,000 rounds of a Garand rifle, or 420 powerful 105MM. artillery shells, or 24 sixteen-inch shells from one of our big battleships.

Wood Cellulose Treated

Gunpowder is one of the more recent of the many military uses of pulpwood. Formerly cotton was used almost exclusively. The discovery that smokeless powder could be made of wood pulp, according to one manufacturer of explosives, has increased production more than a quarter wherever it has been used and has freed Canada and Australia from dependence on cotton.

In the manufacture of smokeless powder, wood cellulose is treated with a mixture of nitric and sulfuric acid, which converts the wood pulp into a new compound, nitro-cellulose.

When the War and Navy Departments made known their requirements for smokeless powder soon after Pearl Harbor, it became apparent that there would-n't be enough cotton to make the nitro-cellulose used in the explosive and to meet all other military needs for cotton as well.

Made More Cheaply

Smokeless powder, moreover, can be made more cheaply from wood pulp than from cotton. One industrial estimate is that Uncle Sam saved more than \$20,000,000 last year as a result of the change-over to pulpwood.

At present, all wood pulp going into smokeless powder in the United States is produced in Washington State. Smokeless powder is but one of the recent war uses in which cellulose from pulpwood plays an important part. It goes into the still and motion picture films which locate targets for Allied bombings, as well as into the X-ray films which are used to examine war wounds or find hidden flaws in steel marked for guns or other war material.

Demand For Dissolving Pulp Is Double 1940 Totals

● Demand for dissolving pulps this year is more than double the requirements for 1940, according to the final report of the combined pulp and paper committee to the Combined Production and Resources Board and Combined Raw Materials Board of U. S., Britain and Canada.

This material is essential in the manufacture of explosives and high tenacity rayon yarns.

"In the light of these facts," states

D-DAY BULLETIN — (THE "CAP" LETTERS ARE OURS)

London, June 6 (AP)—A continent-engulfing barrage of PAPER missiles pounded Europe today with news of the Allied western invasion . . . From heavily freighted cargo planes, PAMPHLETS spilled by the ton with word to conquered peoples that the first blow had been struck toward their deliverance . . . The PAPER bullets began even before the first real ones were fired on the invasion beaches. The all-important task of hauling them was the job of a specially selected Fortress squadron of veterans of propaganda mail flying.

Liaison has been kept with patriots of every over-run country. Instructions were incorporated in PAMPHLETS and sent on their way in much the same manner that a newspaper mailroom functions. Pilots, specially trained, were briefed to hit special targets.

the report, "the pulpwood supply in the Pacific Northwest is particularly important. One United States mill in that area, capable of producing such pulps, is idle; closed down because of lack of pulpwood. Operations of others, on both sides of the border, have been sharply curtailed for the same reason."

In Canada, the operation chiefly affected is B. C. Pulp & Paper Co., operating mills at Port Alice and Woodfibre, B. C. Despite the significance of the committee's recommendation in regard to dissolving pulp, B. C. Pulp & Paper Co. operated at only 61 per cent of productive capacity during the first quarter of this year. The company is the largest individual supplier of Great Britain's requirements of dissolving and bleached sulphite pulps and also ships large quantities to United States and Australia as well as to the domestic market.

The committee recommends that an intensive study should be undertaken immediately by the proper administrative branches in both the United States and Canada, with the aim of getting much needed supplies of pulpwood into those mills that have idle capacity for the manufacture of this "urgent wartime need."

The committee adds that if newsprint consumption in the United States were reduced to an annual rate equivalent to the approved requirements of WPB for the first quarter, there would still remain a shortage of 14.6 per cent or 2,782,000 cords in the supply of pulpwood for all other estimated requirements.

It has been indicated to the committee that some of this 14.6 per cent shortage for products other than newsprint might be reduced by increasing the production of chemical pulps which are in short supply by:

1. Supplying chemical pulp mills in both Canada and the United States which are now idle, or operating at reduced capacity, with more wood, or
2. Extending the practice of substituting pulp production for newsprint mills in both Canada and the United States.

Various administrative problems currently under discussion between the appropriate authorities in the United States and Canada are referred to in the report. These include the supply of pulpwood from British Columbia to the Pacific Northwest states, in view of the urgent need for dissolving pulps, the regulation of proportionate production of various materials in Canada and their shipment to the United States, the working difficulties experienced in maintaining the agreed pool of Canadian labor for employment in the northeastern states, and difficulties experienced in the production and flow of export pulpwood from Canada to the United States attributable to restrictive administrative measures.

B. C. Co. Produces For Direct War Use

● British Columbia Pulp & Paper Co., currently operating at considerably less than capacity owing to shortage of logs, is nevertheless making a substantial contribution to the war program with cellulose products that are finding their way into many markets and a wide variety of wartime uses.

At present most of the company's output is in rayon pulp, of which most is being exported to the United States.

Officials of B. C. Pulp & Paper Co. state that about 87 per cent of the company's total production is now for direct war uses, only about 13 per cent being for civilian requirements.

Under pre-war conditions most of the company's output goes into the fabrication of paper, plastics, staple fiber and civilian rayon use. Today a large proportion of the production goes into the manufacture of explosives for small arms and naval guns and aircraft. Even most of the rayon is for war purposes such as the making of parachutes, powder bags, etc.



The above comic strip is by NORMAN HENDERSON, employe of the Fernandina, Fla., Division of Rayonier Incorporated.

British Columbia Logs Are Allocated To St. Regis, Rayonier and Soundview

● The 32,500,000 feet (58,000 cords) of British Columbia hemlock and balsam being shipped to the United States this year under a U. S. War Production Board-Canadian Timber Control agreement will go to three companies—the St. Regis Paper Co., the Soundview Pulp Co. and Rayonier Incorporated.

Harold Boeschstein, acting director of the Forest Products Bureau of the WPB, who has authority over all pulp and paper operations in the United States declared it was necessary to allocate all

of the logs released by Canada entirely on the basis of highest essentiality and direct military use of end products of the pulp mills.

Several Washington state mills had hoped to obtain some of the logs and some of the mills had hoped the allocation would be made on the basis of average pulpwood use permitted under the WPB. The total release is only about one-fifth of the prewar volume of log shipments from British Columbia to Puget Sound mills.

The recently reopened St. Regis

mill in Tacoma, Wash., which is producing nearly 300 tons daily of bleached and unbleached kraft pulp for overseas packaging and other direct military use, received the largest allocation—12,000,000 feet.

Rayonier Incorporated, whose production of rayon pulp is highly critical, received 11,700,000 feet.

The Soundview Pulp Co. in Everett, making special bleached sulphite pulp for direct military use, received 8,800,000 feet.

Shipments were to begin immediately.

Canada Earmarks 560 Million Feet Of Timber for All U. S. in 1945

Arrangements have been completed with the Timber Controller of Canada, establishing a tentative 1945 import quota of pulpwood from Canada to the United States of 560,000,000 feet (one million rough cords). This quota is a minimum quantity subject to revision later in 1944. It has been established at this time in order that United States consumers may immediately proceed with their pulpwood purchase and production programs in Canada for wood to be shipped in 1945.

Arrangements have been perfected by the Canadian Minister of Labor and the War Manpower Commission which permits Canadian border woodsmen now working in the forests of the northeastern region of the United States to remain there without interruption notwithstanding that present exit permits expire on April 30. The agreement provides for recruitment periods with at least 6-week intervals.

B. C. Produces More Hemlock

● Although production of hemlock logs in the coastal district of British Columbia this season has been in a steadily rising curve as compared with the early months of 1943, the Canadian Timber Control does not anticipate much revision of the original quota for exports to the United States.

Inventory position of the pulp mills in British Columbia has shown some improvement, but they claim there is no surplus and they would probably protest any material increase in the allocation for export.

For the first four months of this year production of hemlock logs in the coastal region of British Columbia was approximately 136,800,000 board feet, compared with 109,800,000 feet for the corresponding period in 1943. Operations in the woods during the 1942-43 winter were seriously handicapped by severe weather. Shortage of labor in the woods has been a continuing disadvantage ever since.

B. C. 1945 Exports Undecided

● Assistant Timber Controller D. D. Rosenberry says his office at Vancouver, B. C., has not been advised of the tentative allocations of one million cords to the U. S. for 1945, and there is no way of telling at this time what the proportion of the proposed export would be represented by authorized shipments from British Columbia to Puget Sound mills. In view of the prevailing uncertainty regarding labor and log supply and the fluctuating inventory position it seems unlikely that any 1945 figures will be given out in even a tentative sense until much later this year. The present authorization

of 32,500,000 feet is practically the same as was shipped from British Columbia last year, when two separate orders were issued, each one representing a permit for export of 15,000,000 feet.

Meanwhile operators of pulp and paper mills in British Columbia have welcomed a new order by the Timber Control prohibiting the destruction of small wood fuel and waste in sawmill burners, restricting hog fuel supplies and curtailing sale, supply, purchase and installation of sawdust burners.

No Cordwood Ceiling In West; Spurs Wisconsin Buying

● Pulpwood ceilings prices in all of the United States west of the 100th meridian have been abolished by order of the U. S. Office of Price Administration, thus tending to encourage the already extensive movement of wood from that area to Wisconsin mills.

The development of this movement was previously reported in this magazine and now it has reached considerable proportions, according to railroad officials. One operator planned a 100-car delivery to a single Wisconsin mill in the month of May.

The order abolishing ceilings also affects farm or cordwood cut and marketed in Washington and Oregon for several mills at Spokane, Everett, Oregon City, etc. However, by far the greatest amount of wood used in the far west is sold in log measure and is still under price ceilings.

Spruce and tamarack are the principal species being shipped eastward. This is the only pulpwood area of the country in which ceiling prices are not in effect. In the past it has not been considered a pulpwood area, being too far from centers of production. There is at present no pulp industry in Montana but a lumber company there has plans to build a mill after the war.

Two cars of Montana wood were shipped to a Puget Sound mill as an experiment recently, but that is the only known case of a westward shipment.

PULPWOOD PRODUCTION REPORT

● During April, U. S. mills received 1,131,473 cords (about 560 ft. to a cord) of domestically produced pulpwood and 72,183 cords of imports from Canada bringing the total intake to 1,203,656 cords. Receipts of domestic wood were 22 per cent above those of April, 1943, but about 57,500 cords below the same month in 1942.

The South and Appalachian region showed the greatest improvements, as they both exceeded their own March records. The Northeast and Lake States, however, reflected severe seasonal slumps.

● The record of domestically produced pulpwood in rough cords by regions follows:

Region	April, 1944	March, 1944	April, 1943
Appalachian	139,144	121,000	101,000
Northeast	95,205	160,000	88,000
Lake States	148,163	341,000	60,000
South	523,486	512,000	502,000
Pacific Northwest	225,475	203,000	176,000

Total U. S. 1,131,473 1,337,000 927,000

Canadian imports by regions were: Appalachian, 200; Northeast, 46,577; Lake States, 19,616; Pacific Northwest, 5,790.

Two WPB Pulpwood Committees Created; Boeschstein Pleads for "Understanding"

"Your customers must recognize that you have an obligation in the war," he tells Pacific Northwest industry leaders. Western mills threatened by widespread woods and lumber mills strike, which cuts deep into inventories. Labor situation dominates launching of new advisory group in Seattle. WPB officials visit Ladysmith, B. C. "experiment" and Soundview, St. Regis, Weyerhaeuser and Crown Zellerbach operations.

THE Pulpwood Industry Advisory Committee of the U. S. War Production Board has been split into eastern and west coast divisions and hereafter there will be two separate committees functioning in Washington, D. C., and Seattle.

The new West Coast Pulpwood Industry Advisory Committee held its first meeting in the Olympic hotel, Seattle, May 29, under most disconcerting conditions. The group met at almost the peak of a strike of nearly 35,000 loggers and lumber workers on the Pacific Coast which had forced the shutdown of 85 lumber plants and cut heavily into logs, and hogged fuel supplies and chips from lumber mills destined for the pulp and paper mills. Some of the committee members said their mills had logs for only two or three weeks ahead.

Harold Boeschstein, acting director, Forest Products Bureau, WPB; James L. Madden, deputy director in charge of pulpwood production, Paper Division, WPB, and U. S. Army liaison and procurement officers had come west from Washington to launch the new committee.

The strike dominated the meetings. Discussions, private and otherwise, continually reverted to the threat hanging over pulpwood and pulp production, making both plans and prospects for the industry decidedly uncertain.

"Eighty per cent of the high alpha pulp is produced in this part of the country," Mr. Boeschstein declared in a statement to the press. "If we don't get it here—we don't get it. Failure to get it, bites into the army artillery program."

Endangered Invasion

He added:

"Delay in getting pulp, paper and lumber means danger to the invasion plans."

Lt. Col. Martin J. McDonald, U. S. Army, who accompanied the Washington group, said:

"We need the nitrating pulp which is produced in the Pacific Northwest badly. Ships come in for lumber and can't be loaded. That's serious."



HAROLD BOESCHSTEIN (left) on leave as President of Owens-Corning Fiberglass Corp., is the Acting Director of the Forest Products Bureau, U. S. War Production Board, with authority over the pulp and paper and lumber industries, as well as certain phases of printing and publishing and other related activities.

KENNETH B. COLMAN (center), Regional WPB Director in Seattle.

JAMES L. MADDEN (right), on leave as Vice President of Hollingsworth & Whitney Co., Boston, operators of pulp and paper mills in Maine and Alabama, is Deputy Director of the Paper Division, Forest Products Bureau, in charge of Pulpwood Production.

While carefully keeping off the subject of the merits of the wage dispute which caused the strike, these men undoubtedly helped to bring it to an end by their press interviews.

The strike started when the National War Labor Board refused wage increases for AFL and CIO lumber employees. William H. Davis, board chairman, termed the "fishing holiday" of the loggers and lumber employees a violation of labor's no-strike pledge.

The walkouts were sporadic and scattered. Shutdown of part of the Long-Bell lumber mill in Longview, one of the biggest in the world, cut off part of the chip supplies to Longview Fibre Co., a principal producer of critical V-boxes. The lumber mill of Oregon Pulp & Paper Co. was closed. Other pulp and paper mills were beginning to be affected in various ways. With a reduction of 5,000,000 bbls. in oil for the Northwest by the government, the diminished hogged fuel output from lumber mills became even more serious to pulp and paper mills. A direct threat to the pulp mills' log supplies developed.

Union leaders made appeals to employees to return, declaring the

Labor Board would reconsider the wages if the men resumed work. These appeals were not very effective but the strike gradually petered out.

Fred Brundage, Western Log and Lumber Administrator, WPB, who attended the pulpwood committee meeting, said about 10,000,000 feet (equivalent to about 18,000 cords of pulpwood) of logs were being lost every day during the ten days or so that the strike was at its peak.

The effect of the strike may be felt more seriously next winter as a result of losses in inventories and the likelihood of winter weather hampering production at that time.

Lawyers Give Blessing

• The West Coast Pulpwood Industry Advisory Committee is the first industry advisory group to be permitted to hold meetings outside of Washington. The lawyers of the WPB, who are called in on such matters, finally figured out a way to making these meetings away from the national capital "legal."

The Seattle and the Washington committees are expected to meet every two months and the next meeting in Seattle will be sometime in August.

These committees are expected to advise with WPB officials, recommend actions but will not police federal directives. Some observers commented that they receive more "advice" than they were allowed to give. However, the general feeling is that such committees serve

a useful purpose, because WPB officials will get more accurate information from a group than they might get from individual operators. In other words, one operator's information or suggestions will be made in the presence of others and be checked by the others.

As a matter of fact, there is almost no control by the WPB over pulpwood except in allocations of the imports from Canada, which are reported elsewhere in this issue. The Puget Sound mills—alone of all mills in the nation—have quotas of pulpwood they may use each quarter which they are not expected to exceed without recourse to the WPB. The quotas formerly were on a monthly basis.

An important reason for dividing the Pulpwood Advisory Committee in two, was to cut down on railroad mileage and time consumed for the far western members who had to travel to Washington every two months. These members, Walter DeLong, St. Regis Paper Co.; Irving T. Rau, St. Helens, Pulp & Paper Co., C. E. Ridgeway, Soundview Pulp Co., and Phil Henderson, Rayonier Incorporated, are now members of the western committee.

Joint meetings of the two committees are planned in Washington about twice a

year. Whenever these are held, all members of the West Coast group will be invited to the capital, but it is doubtful if more than a few will be able to go.

Another reason for having a West Coast committee is that the problems on the Pacific Coast are different from those in the east—mills out west use logs instead of cordwood and their logs come out of the woods with sawmill logs, often without any settled destination until they reach saw or pulp and paper mills.

Madden's Statement

● Mr. Madden, 34-year-old vice president of Hollingsworth & Whitney Co., Boston, on leave from that position while serving in Washington, presided at the first session of the West Coast group. Henry G. Champeaux, western representative of the Paper Division, WPB, will preside at future Seattle meetings. All men who represented their mills at this first meeting are expected to continue permanently as representatives.

Mr. Madden presented figures to the group on pulpwood production and said: "From now on consumption can be no greater than production. Inventories are at an irreducible minimum. Now over

70 per cent of paper and paperboard is being used to maintain the war effort. Our job is to do everything possible to increase production of logs.

"In the past two years inventories of pulp have dropped approximately 600,000 tons, pulpwood has declined approximately 1,000,000 cords, which is equivalent to about 600,000 tons of pulp. Waste paper has been reduced by over 300,000 tons and finished paper inventories in converters' warehouses and on wholesalers' shelves have dropped about 40% in the last two years.

"Inasmuch as 25 per cent of the marketable pulp of the country is normally produced in the Pacific Coast region," he said, "it is important that production in this area be maintained to prevent widespread shutdowns in paper mills throughout the country, with a consequent disruption of many industries which require paper to ship their products. At present the Army is shipping over 700,000 different items overseas and all of these with the exception of fluids require lumber, paper board, or paper for their packaging."

Dickey's Summary

● After the Olympic hotel session, the committee repaired to the Rainier Club for a luncheon.

Here, tersely and in very few words, U. M. Dickey, president of Soundview Pulp Co., summarized the most critical problem facing the industry today. This he said, was the shortage of wood, and this, in turn, was due entirely to a shortage of men in the woods.

He made this statement when Mr. Boeschstein, who had delivered the principal address at the luncheon, called upon committee members and other mill officials, who were guests, to express their views.

Mr. Dickey made this point after Mr. Boeschstein had indicated that his agency, the Forest Products Bureau, and its subdivision, the Paper Division, had no control over manpower. Although Mr. Boeschstein made no direct statements on this serious question, he left the impression that his agency was without important influence in the only really serious problem, as Mr. Dickey explained, which faces the industry.

Mr. Boeschstein conceded the seriousness of this problem, declaring that the woods industry doesn't easily attract new people to make up for manpower losses and that it cannot draw labor, therefore, from a common pool. The type of work, he said, is even more specialized in the west.

"No production is more important than the specialized pulps produced in the west," he said.

Boeschstein's Speech

● In beginning his talk, he said he and Mr. Madden and the army officers had come west to "expose ourselves to the industry and to permit the industry out here to expose itself to us."

He jokingly referred to the gift from a friend of a button reading "bureaucrat" but denied that he was one, his interest being primarily in production.

"Our task," he said, "is taking too little of what we need and trying to divide it up to suit everybody and meet war requirements."

A "quick increase in production must come from those running business" and not from government and the "primary problem is to cut off the least essential

EASTERN PULPWOOD INDUSTRY ADVISORY COMMITTEE

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Government Chairman
Washington, D. C.

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East Ryegate, Vermont

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& Paper Co.
Wisconsin Rapids, Wis.

A. H. Stier
Container Corp. of America
Fernandina, Fla.

R. L. Caldwell
Rhinelander Paper Co.
Rhinelander, Wis.

James B. Nash
Nekoosa-Edwards Paper Co.
Port Edwards, Wis.

K. A. Swenning
Hollingsworth & Whitney
Co.
Boston, Mass.

Wm. D. Comings
W. Va. Pulp & Paper Co.
New York, N. Y.

Frank E. Pearson, Jr.
Great Northern Paper Co.
Bangor, Maine

C. E. Wilds
The Brown Paper Mill Co.,
Inc.
Monroe, La.

A. G. Curtiss
Gaylord Container Corp.
Bogalusa, La.

WEST COAST PULPWOOD INDUSTRY ADVISORY COMMITTEE

Henry G. Champeaux
Government Chairman
Seattle, Wash.

E. E. Flood
Pacific Paperboard Co.
Longview, Wash.

C. Wylie Smith
Coos Bay Pulp Corp.
Empire, Ore.

Taylor Alexander
Columbia River Paper Mills
Oregon Pulp & Paper Co.
Portland, Ore.

J. C. Hayes
Everett Pulp & Paper Co.
Everett, Wash.

L. J. Steinhardt
The Paraffin Companies, Inc.
Emeryville, Calif.

Myron W. Black
Inland Empire Paper Co.
Millwood, Wash.

Phil Henderson
Rayonier Inc.
Seattle, Wash.

Lawson Turcotte
Puget Sound Pulp & Timber
Co.
Bellingham, Wash.

Carl E. Braun
Hawley Pulp & Paper Co.
Oregon City, Ore.

Irving T. Rau
St. Helens Pulp & Paper Co.
St. Helens, Ore.

H. M. Washbond
Spaulding Pulp & Paper Co.
Newberg, Ore.

Walter DeLong
Kraft Pulp Division
St. Regis Paper Co.
Tacoma, Wash.

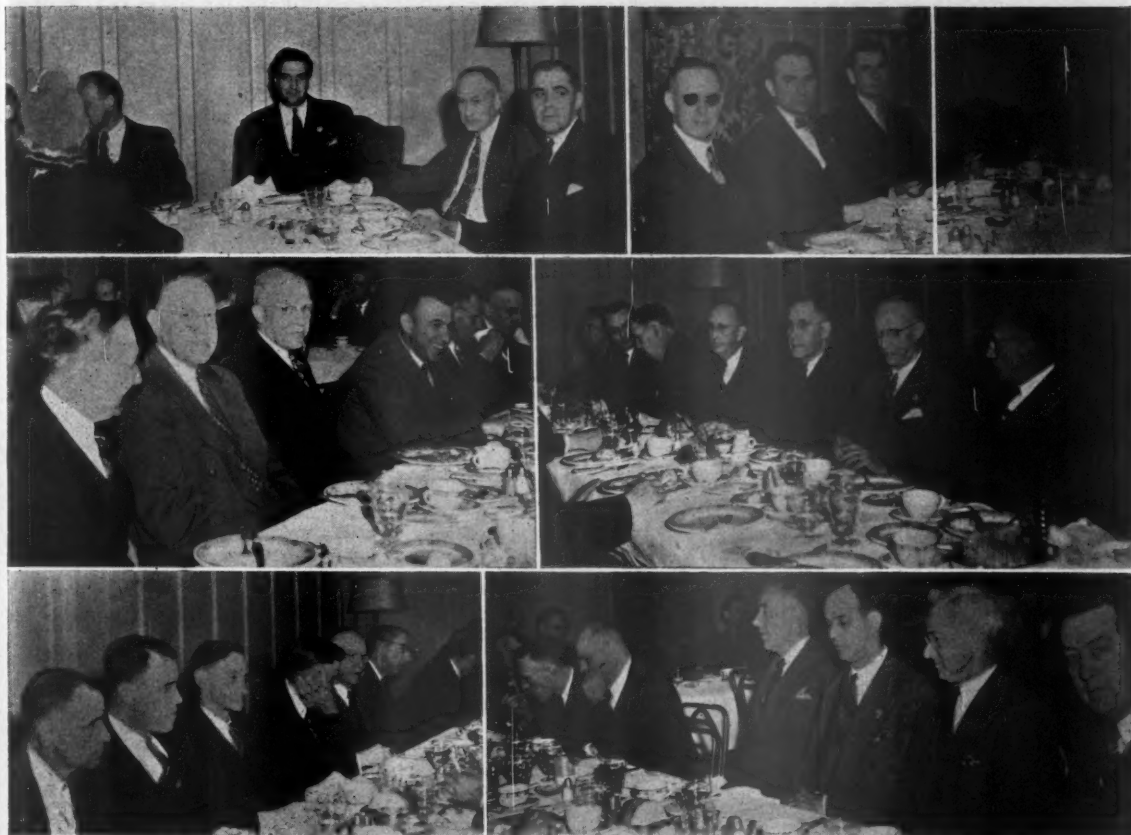
C. E. Ridgeway
Soundview Pulp Co.
Everett, Wash.

R. S. Wertheimer
Longview Fibre Co.
Longview, Wash.

D. S. Denman
Crown Zellerbach Corp.
Seattle, Wash.

R. W. Simeral
Fir-Tex Insulating Board Co.
St. Helens, Ore.

R. B. Wolf
Pulp Division
Weyerhaeuser Timber Co.
Longview, Wash.



THE LUNCHEON FOR THE NEW WEST COAST PULPWOOD INDUSTRY ADVISORY COMMITTEE and other guests at the Rainier Club, Seattle, May 29.

Top row (left to right): Secretary who reported proceedings, with her back to camera; R. B. WOLF, Manager Pulp Div., Weyerhaeuser Timber Co. (partly obscured); JOSEPH E. GANDY, Chief Deputy Regnl. Director, WPB, Seattle; FRED BRUNDAGE, Deputy Regnl. Director, WPB, Portland, and Western Log and Lumber Administrator; HAROLD BOESCHENSTEIN, Acting Director, Forest Products Bureau, WPB, Washington, D. C.; KENNETH COLMAN, Regnl. WPB Director, Seattle; JAMES L. MADDEN, Deputy Director, Paper Div., WPB, Washington, D. C.; Lt. Col. MARTIN McDONALD, Chief of Forest Products for Army, Hqtrs. Staff, ASF, Washington, D. C., and Maj. RALEIGH CHINN, USA, Lumber and Paper Procurement for Army Ordnance, Washington, D. C.

Center—on left side of table (left to right): ANSON B. MOODY, Vice. Pres., Everett Pulp & Paper Co.; CARL E. BRAUN, Vice Pres., Hawley Pulp & Paper Co.; LEO S. BURDON, Gen. Mgr., Soundview Pulp Co.; R. S. WERTHEIMER, Vice Pres., Longview Fibre Co.; IRVING T. RAU, Sec.-Treas., St. Helens Pulp & Paper Co., and E. T. CLARK, Pacific Northwest Loggers Assn.

On right side of table (left to right): Major CHINN; DeWITT WALLACE, Dist. Mgr., WPB, Spokane, Wash.; MYRON W. BLACK, Asst. Mgr., Inland Empire Paper Co.; C. E. RIDGEWAY, Soundview Pulp Co.; U. M. DICKEY, Pres., Soundview Pulp Co.; TAYLOR GREEN, WPB, Seattle; MORTON B. HOUSTON, Vice Pres., Rayonier Incorporated. (Out of the picture on right was PHIL HENDERSON, Rayonier Incorporated.)

Lower row—on left side table (left to right): TAYLOR ALEXANDER, Manager, Columbia River Paper Mills; C. WYLIE SMITH, Vice Pres., Coos Bay Pulp Corp.; H. M. WASHBOND, Auditor, Spaulding Pulp & Paper Co.; WALTER DeLONG, Vice Pres., Kraft Pulp Div., St. Regis Paper Co.; J. H. BLOEDEL, Ch. of Board, Bloedel-Donovan Lumber Mills (whose affiliate company in Canada plans pulp production after the war); Col. W. B. GREELEY, Secy., West Coast Lumbermen's Assn., and Mr. WOLF.

On right side of table (left to right): THEODORE TURNER, Regnl. Attorney, WPB, Seattle; R. W. SIMERAL, Vice Pres., Fir-Tex Insulating Board Co.; DON S. DENMAN, Vice Pres., Crown Zellerbach Corp.; HENRY G. CHAMPEAUX, Regnl. Representative, Paper Div., WPB, Seattle; J. C. HAYES, Forester, Everett Pulp & Paper Co., and RAY DAVISON, WPB, Washington, D. C.

things and those things which are in excess."

He conceded this would jeopardize customer relationships and that this was usually the first objections raised by industries.

"I'm in business myself," said Mr. Boeschstein, "and I haven't been taking care of a lot of customers for a long, long time. They have an obligation in this war, and they must recognize that you have an obligation. They must recog-

nize that you turned them down because you are an American and have a job to do."

He declared his strong opposition to making "horrible examples" of non-complying industries and said he would much prefer to work the other way, working only for cooperation. He contended there was still plenty of competition left in industry.

He stated that the steel industry, in which he was associated as a WPB official earlier in the war, is an example of

an industry that "cooperates best today" because it was "placed under control early in the war."

"When an industry understands what the need is and the reason for it, we get this understanding and cooperation," he said.

He said lumber and the pulp and paper industries have been late "in getting into controlled production." It is hard at this late date, he said, to organize the thinking in those industries, but indicated they would learn the urgency of

cooperation as did steel and aircraft.

"Paper and lumber are the most critical products today," he said. "Metals, chemicals and other products, are in good hand."

He pleaded for "understanding" which he asserted was necessary for successful prosecution of the war. He declared it was a mistake to speculate on how long the war would last, and closed by quoting a story by John Lord O'Brian, the WPB attorney in Washington; who said the "best prognostication" was a old fisherman in Canada. According to the story, the fisherman said:

"I've been reading a lot and listening to a lot on the radio and I have come to the conclusion that how long the war lasts depends on what happens."

Tour Western Mills and Camps

● Mr. Boeschstein, Mr. Madden and the army officers visited the Ladysmith, B. C., "small log recovery experiment" of Comox Logging & Railway Co. and the Powell River Co., which is described elsewhere in this issue. While in Canada they called on Timber Control headquarters in Vancouver, B. C., and discussed the critical question of the drastically reduced log exports by Canada to Puget Sound mills with Assistant Timber Controller D. D. Rosenberry.

Mr. Madden and Mr. Champeaux visited logging operations of the Soundview Pulp Co., and the St. Regis Paper Co., the pulp mill of Weyerhaeuser Timber Co., in Longview, Wash., and the Crown Zellerbach paper mill at Camas, Wash. Mr. Boeschstein attended lumber meetings in Portland and the others were in that city also to call on leaders of the pulp and paper industry.



CAPTAIN BEN RYAN, on leave as the Personnel Manager, Fernandina, Fla., Division, Rayonier Incorporated, was entertained by old friends recently during a stopover in the Florida city. Capt. Ryan, stationed in New Orleans, was on trip to New York on government business.

STATE OF THE INDUSTRY IN U. S. TODAY

Northeast States—Most critical in nation. Small mills forced to close. Inventories down to bedrock and more mills may close before 1945. WPB planned survey before third quarter allocations.

Appalachian Region—Comparatively favorable condition. Wood receipts constant. Canadian imports declined.

South—Wood receipts about the same as three-year averages. Although inventories down to ten days in many cases, that is not regarded as serious in south. Rain impeded cutting but later farm season will help in wood production. Unbleached kraft production is insufficient for war needs and many mills limited to producing containerboard, multiwall bags and other essentials.

Lake States—Remarkable increase in wood inventories with some mills having two years' supply ahead. Successful appeals to farmers was big aid. Also good weather. So much poplar cut, it is difficult for mills to absorb it. Canadian imports declined. Some mills required by WPB to shift to containers, etc.

Pacific Coast—Woodsmen and lumber workers strike cut deep into inventories, reduced hogged fuel supply. There had been improvement up to that event in late May and early June. Recent lumber price increase may neutralize benefits which had been expected from pulp price boost. Manpower losses are cutting back production gains, too.

Raymond Barton of Michigan Paper Co. Becomes Head of Superintendents Assn.

● Raymond L. Barton, superintendent of the paper mill of Michigan Paper Co., Plainwell, Mich., was elected president of the American Pulp & Paper Mill Superintendents Association, Inc., which held its annual meeting at the Edgewater Beach hotel on Chicago's gold coast May 24-26.

Mr. Barton is a New Englander who went to the Michigan industry from New Hampshire as one of the modern type of superintendents who have specialized in technical studies. Short and dark, he has long been a loyally active member of the association.

He steps into the position capably filled during the past year by Stanford G. Blankenship, head of the New York office, 230 Park Ave., of Port Royal Pulp & Paper Co., Ltd.

With Mr. Barton's election, two men of Michigan Paper Co. are this year heading two outstanding organizations of the industry.

His chief, Dwight L. Stocker, president of the company, is president of the Stocker attended the superintendents meeting as toastmaster at the opening Association of Pulp Consumers, Inc. Mr. day luncheon.

Equipment and materials company representatives outnumbered the mill superintendents who were able to get to this year's APPMSA meeting but an interesting program was presented.

Anderson 1st V.-P.

● Niles M. Anderson, former manager of west coast mills, now vice president and manager of the Marathon Paper Mills of Canada, Toronto, Canada, was advanced to the position of first vice president, placing him in line to head the organization next year. He originally was elected a vice president as a representative from the Pacific Northwest.

Mr. Anderson was chairman of the chemical pulp session, as which brown stock washing was discussed by John H. Noble of Improved Paper Machinery Co., and the preparation of chips by Bruce Suttle of the Herty Foundation, Savannah, Ga. Recovery equipment and new bleaching methods were discussed.

An interesting power and plant engineers' session was held under Raymond Bennett of Ecusta Paper Corp. R. H. Miller of J. O. Ross Corp., discussed humidity control, M. H. Kuhner of Riley Stoker Corp. talked on steam economies and D. L. Beeman of General Electric some postwar prospects.

The superintendents had an enrollment of 934 members paid up as of April 30 this year, their biggest in history.

Robert L. "Bob" Eminger, of Miamisburg, Ohio, who retired at this meeting after 20 years of service as secretary, announced a membership of only 468 in the first report he made in 1925. "Bob," incidentally, plans to continue living in Miamisburg, where he was born 70 years ago, in the heart of the Miami Valley paper industry.

George W. Craigie of Cumberlandville, Maine, was elected to succeed Mr. Eminger. New headquarters will be opened in New York.

Attending this year's meeting from the far west were Jack Wilcox, Electric Steel Foundry Co., and Charles Frampton, superintendent, Fernstrom Paper Mills.

West Coast Overlooked

● There was some disappointment expressed among members of the association on the Pacific Coast because no far westerner was elected to any of the five vice presidencies—now occupied by five men who are in the natural course of events slated to succeed in the next five years to the presidency.

First Vice President Anderson, who had been chosen from the west coast division, which incidentally is one of the largest, four years ago, is now a resident of Toronto. The second v.-p. is Homer Latimer, Champion Paper & Fibre Co., Hamilton, O.; the third is Raymond Bennett, Ecusta Paper Corp., Pisgah Forest, N. C.; the fourth is Ollie Messner, Robertson Paper Box Co., Montville, Conn.

The fifth vice president, added this year, was chosen from the mid-west—Charles Reese, Nekoosa Edwards Paper Co., Port Edwards, Wis.

More than 600 attended the convention.

TACOMA MILL STARTS BLEACHING KRAFT; Some Southern Production Shifted North

More Northern U. S. mills may be "conscripted" *✓ ✓ ✓* Possibly one-quarter of sulphite for fine papers may be diverted into packaging materials *✓ ✓ ✓* One-half of all U. S. paper now goes overseas as wrapping *✓ ✓ ✓* St. Regis strengthens postwar position with acquisition of more timber.

THE Kraft Pulp Division, St. Regis Paper Co., Tacoma, Wash., which reopened last March 17 after a 17-months' shutdown, began making 50 per cent bleached kraft pulp and 50 per cent unbleached on May 15.

The start-up of the bleach plant was in accordance with wishes of the War Production Board, because of a demand for high grade test kraft for the U. S. Army.

However, unbleached kraft pulp, required principally for packaging for Army, Navy and Lend-Lease—used to package almost every kind of product going overseas, from machinery to food—continues to be the most critically needed grade of pulp. And paper, along with lumber, continues to be the principal critical items in all war production, according to top WPB officials.

When the St. Regis mill in Tacoma started up—entirely on unbleached kraft—this single mill was supplying nearly three per cent of the total unbleached kraft production in the United States. This indicates how important it was to the war effort in getting this mill in production again after it had been shut down because of a WPB order that was admittedly regretted by the WPB when paper became a top critical item in 1943.

The St. Regis mill, however, will continue indefinitely in producing half bleached kraft. The mills to which its production goes are not revealed by the WPB but are believed to be primarily in the Middle West.

The St. Regis mill started up in late April, producing 275 tons a day. By late May production was up close to 300 tons per day. (Its 1942 bleached sulphate capacity was listed as 375 tons daily.)

Southern Industry Orders

● As a result of the critical situation in kraft production, the southern kraft industry in the United States has been directed to limit its production to containerboard, waterproof, multiwall bags and industrial wrapping paper and to shift the rest of its normal production to other

mills in other regions.

This drastic action by the WPB has been declared necessary because of increasing army and navy demands on the eve of the European invasion and speeding up of preparations for the big push in the Pacific. Half of the entire U. S. paper production is now going into overseas packaging.

Further orders shifting production from one mill to another may be expected. The only possible way this can be averted is to overcome a 200,000-ton deficit between production and requirements for containerboard in the second quarter.

Mills which never made wrapping paper before may be "conscripted."

New APPA First V.-P.



COLA G. PARKER, President of Kimberly-Clark Corp., Neenah, Wis., was elected First Vice President of the American Paper & Pulp Association at a recent meeting of the governors and executive committee.

Native of Wisconsin, Mr. Parker graduated from the U. of Chicago and U. of Chicago Law School; is married and the father of four children. He practiced law in Chicago before the last war, was in the U. S. Army for 19 months and thereafter practiced in New York until 1937, ultimately becoming senior member of Wise, Whitney & Parker. Vice President of Kimberly-Clark from 1937 to 1942, he became President in that year.

The civilian supply of wrapping and packaging is being drastically curtailed and further cuts in newsprint may be necessary in order that wood and pulp use in packaging production may be increased. The likelihood of any improvement in the situation is lessened by the fact that overseas packaging is unrecoverable as waste.

It is possible that, before the fourth quarter, about 50 per cent of sulphite going into fine papers may be diverted into container production.

In the Tacoma, Wash., area—site of the St. Regis mill—the selective service officials are dealing with pulp mill employes and loggers on the same basis as airplane factory employes—as essential in the same category.

New Timber Deal

● The St. Regis Co. further strengthened its long-range postwar position with the purchase of the North Bend Timber Co., North Bend, Wash.

Walter DeLong, vice president and manager of the Tacoma Kraft Division, said 400,000,000 feet (more than 700,000 cords) of fir, cedar and hemlock and the company's logging equipment were acquired. The timber will be logged over a 20-25-year cycle.

This purchase is considerably smaller than the deal by which the St. Regis Company in late 1943 acquired 45,000 acres of the West Fork Timber Co. lands in Lewis County, Wash., and 65,000 acres on adjacent public lands. But these acquisitions are expected to give the Tacoma pulp mill a "perpetual" supply of wood.

Mr. DeLong said about 350 employes are now engaged at the mill and about 300 more as loggers in the woods, the total payroll being around \$160,000 a month.

St. Regis Co. Uses German War Prisoners

A group of war prisoners, veterans of North Africa, Sicily and Italy, recently started wood cutting in Diana County, New York, cutting timber from one of

the tracts owned by St. Regis Paper Co., 230 Park Avenue, New York, Roy K. Ferguson, president of the St. Regis Co., announced that this pulpwood would move to the company's mills at Deferiet and Harrisville, N. Y., where important government contracts for paper require continuous supply of wood.

Certification of shortage of labor and need of employment of these prisoners was made by the United States Employment Service. Following this, a contract was negotiated between St. Regis and the War Department, which provided for the moving of a group of Germans to the C.C.C. Camp at Croghan, N. Y. The men are quartered in comfortable camp buildings, and have received training under the direction of the Timber Production War Project of the U. S. Forestry Service.

Many prisoners are unfamiliar with woods work. However, it is reported that they are strong and healthy and most of them seem anxious to learn.

St. Regis Plans \$3,000,000 Expansion in Tacoma

At a recent meeting in Tacoma, Wash., of the Washington State Committee for post-victory employment, Walter DeLong, vice president and manager of the Kraft Pulp Division, St. Regis Paper Co., Tacoma, stated that his firm is planning to spend \$3,000,000 and to add 500 to 700 workers in expanding its Tacoma operations.

Russ Cooper, Harry Andrews Tour East and South

Russell Cooper, general superintendent, and Harry Andrews, control superintendent of Powell River Co., left late in May for an extended tour of eastern and southern pulp and paper mills. They planned to obtain data pertinent to Powell River's plans for after-the-war expansion.

Fir-Tex Plans Changes In Dryer Equipment

Fir-Tex Insulating Board Co., of St. Helens, Ore., plans several improvements in its plant as soon as materials are released by the War Production Board.

The company expects to convert its Coe Dryer over to a steam-heated dryer and has under consideration other improvements in dryer equipment. It is planned also to install a whole log hydraulic barker which would make considerable savings in wood, replacing the mechanical system of barking logs.

Dr. Otto Kress Pictures Kraft As "Pulp of Future"

Dr. Otto Kress, technical research director of the Institute of Paper Chemistry, Appleton, Wis., told the May 1 meeting of the new Chicago Professional Paper Group that the pulp of the future will be largely of kraft base. He told of recent developments in the bleaching of kraft and improving kraft pulp products.

Harold Alley, technical director, Tested Papers of America, Inc., presided at the meeting in the Hamilton Hotel, 20 South Dearborn St., Chicago, where the group plans to meet every first Monday of the month except in July and August.

A. E. Montgomery, vice president of the group and western manager for the J. O. Ross Engineering Corp., introduced Dr. Kress. There were 125 at the meeting.

Coast Manufacturers and Unions Agree to Night Wage Increase of 2½c. Hr.

For the 10th successive year, Pacific Coast industry bargaining negotiations were held in early June. Sessions began on June 7 in the Public Service Building, Portland, Ore., between the Pacific Coast Association of Pulp and Paper Manufacturers and AFL representatives of the International Brotherhood of Pulp, Sulphite and Paper Mill Workers, and the International Brotherhood of Paper Workers.

On June 10, the final day, the negotiators agreed upon a new contract for one year beginning June 1, 1944, giving night shift employees a 2½ cent hourly wage increase. Vacations for employees of five years' service or more, were increased from one to two weeks. A joint committee was set up to study insurance and retirement plans requested by the unions.

The agreement was subject to approval in a union referendum. It then goes to the War Labor Board. Last year, when a five cent increase across the board was adopted, it was some time before the government agency approved. However, this year, as was the case a year ago, the wage increase would be retroactive to June 1, if approved.

Prior to the joint session, pre-conference sessions were held for each of the contracting parties; for the manufacturers at the Benson Hotel commencing on June 6, and for the two brotherhoods at the Heathman Hotel starting June 4.

During the long period of joint conference and action, all differences between the two groups have been successfully settled. The only strike on the west coast during that period resulted from a jurisdictional labor dispute between unions.

No pre-conference statements of objectives were made by either party.

The negotiations are considered as a model for bargaining relationships between employees and employers. Thirty-three manufacturers are represented on one hand; all employees on the other.

John H. Smith, president of the manufacturers group, said "this meeting again demonstrates the soundness of negotiations carried on in open meetings whereby all the delegates may hear the statements made by the negotiating committees."



CARL BRAUN, Vice President and Mill Manager of Hawley Pulp & Paper Co., Oregon City, Ore., had a lot of gold braid around when COMMDR. PETE HARRESCHOU (left) U. S. Maritime Service, and COMMDR. B. W. CLOUD, U. S. Navy, visited their old friend at the mill. Many of Pete's friends will be glad to see how he looks since he changed from the clothes he used to wear as chief steam engineer at Columbia River Paper Mills, Vancouver, Wash., and later in the steam department of the Crown Zellerbach mill at Camas, Wash. Both men are at present in the Pacific with their ships.

Harold Swafford Dies In Los Angeles

Harold A. Swafford, sales manager for the past five years of the fruit tissue division, Crown Willamette Paper Co., Los Angeles division, Crown Zellerbach Corp., died May 2, after a brief illness from which he had been thought to be recovering. He was succeeded by Robert Tily, former assistant manager of Citrus Wrap, and associated with the company at Los Angeles for 19 years.

Mr. Swafford had been with Crown Zellerbach for 37 years. Before transferring to Los Angeles he had been manager of mills at Lebanon, Ore.; Floriston, Calif., and Harlingen, Texas. He had been divisional sales manager in Texas.

C. F. Gaiser Dies; 24 Years With Crown-Z.

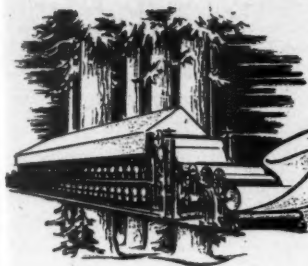
C. F. Gaiser, purchasing agent for Crown Zellerbach Corporation, Portland, Ore., passed away on April 27.

Mr. Gaiser had spent 24 years with his company, and prior to this employment was for 12 years assistant superintendent of the dining and sleeping car department of the Great Northern Railroad at Spokane, Wash.

Born in Claremont, Iowa, February 28, 1877, he maintained fraternal or community connections over a long period with Sunnyside Masonic Lodge, Staub Memorial Church and the Chamber of Commerce. He was likewise a member of the Purchasing Agents Association of Oregon.

Pacific Coast Superintendents--TAPPI

JOINT ANNUAL SPRING MEETING



Sam Salmonson becomes new head of western division of American Mill Superintendents Association
 Erik Ekholm advances to chairmanship of technical section
 Shibley Prize awarded.

A RECORD-BREAKING attendance was registered for the Joint Annual Spring Meeting of the Pacific Coast superintendents and TAPPI at the Multnomah hotel, Portland, Ore., June 3.

There were a total of 266 registered for the full day program, which was greater than the attendance for any previous similar industry affairs ever held on the Pacific Coast, except, of course, the national conventions which were held in the west in 1934 and 1940.

In pre-war years, the Spring Meetings, then three-day affairs, sometimes had larger attendances for the final banquet and dance. But never before was there such a large enrollment for the entire program except at the two national conclaves.

General Convention Chairman A. G. Natwick, who was largely responsible for the record turnout, announced at the evening dinner that this record total of 266 (189 men, 77 women) was increased to 282 at this year's final event.

The attendance for the whole day was twice as great as at the one-day 1943 meeting when 114 were registered—79 men and 39 women. At the only other post-Pearl Harbor meeting, the two-day 1942 session, there were 223—145 men and 78 women.

A new innovation, making possible an unusually large attendance of mill men, was the action of a group of pulp and paper mills in the Columbia-Willamette area in acting as hosts for superintendents and technical men from their mills.

Cognizant of a public opinion that is strongly against wartime conventions which serve no useful purpose, the men of the industry who organized this year's meeting crowded constructive discussions into the day. There were four technical papers delivered, especially directed toward helping to increase efficiency and productiveness of an industry which is supplying some of the most urgently needed war materials. There was a round table also on the critical subject of possible wood savings by



SAM A. SALMONSON, Soundview Pulp Co., Everett, Wash., who is the new Chairman of the Pacific Coast Division, American Pulp & Paper Mill Supts. Assn.

newly developed hydraulic barking methods.

Golf and other amusements of the years when three leisurely days were given over to the spring meeting were eliminated from the program.

Business sessions were brief. Sam A. Salmonson, assistant superintendent, Soundview Pulp Co., became the new chairman of the Pacific Coast division, American Pulp & Paper Mill Superintendents Association, and Erik Ekholm, general superintendent, Puget Sound Pulp & Timber Co., stepped up to the chairmanship of the Pacific section of the Technical Association.

King Wins Shibley Prize

• The dramatic high point of the meeting was the presentation of the Shibley Award for 1944 to Glen King, who is now in the Central Technical Department, Crown Zellerbach Corp., Camas, Wash. As is customary, the decision of the executive committee of the coast section of TAPPI, was a well-guarded secret until Mr. Natwick, master of cere-

monies at the evening dinner, called upon Albert S. Quinn and H. A. Des Marais to escort young Mr. King to the dais for his reward.

Mr. King had given his paper on "Pulp and Paper Mill Slime and Control" only a few hours earlier at the afternoon technical session. By vote of the executive committee of the Pacific section of TAPPI it was adjudged the best paper presented at any of the coast TAPPI meetings of the past year by a person actively working in the coast industry. There were three other papers in this year's competition.

Mr. King wrote the paper while employed as a research chemist at the Crown Zellerbach newsprint mill in Port Angeles, Wash., which made him eligible for the competition. The award was suggested by and named for, the late Kenneth "Cap" Shibley, who organized the Northwest Filter Co., and installed filter plants in a number of mills before his untimely death early in his career. The idea of the prize is to encourage young men in the mills and the monetary reward of \$50 is of far less importance than the honor.

On Page 39 in this issue we have published the prize-winning paper. Also at the evening dinner, Mr.



ERIK EKHOLM, Puget Sound Pulp & Timber Co., Bellingham, Wash., the new Chairman of Pacific Section of TAPPI, presiding at morning technical session.

Natwick announced that the Camas mill with 18, Longview Fibre Co., with 16, and Hawley Pulp & Paper Co., with 15, led all other coast mills in having the largest delegations present.

It was very much a mill men's meeting. It was notable that equipment and supply company representatives were quite out-numbered.

Superintendents' Division

● The outgoing chairman of the Pacific Coast superintendents, Charles G. Frampton, superintendent, Fernstrom Paper Mills, Inc., Pomona, Calif., was a delegate to the annual national convention of the superintendents in Chicago May 24-26 and sent a message from New Orleans, while on a subsequent eastern business tour, wishing success to the joint meeting in Portland.

In his stead, First Vice Chairman Salmonson presided at the superintendents business session and the afternoon joint technical session.

For 1944-45, the superintendents elected:

Chairman—Mr. Salmonson.

First Vice Chairman—Charles E. Ackley, superintendent, Lebanon, Ore., division of Crown Zellerbach Corp.

Second Vice Chairman—G. F. Alcorn, plant engineer, Everett, Wash., Pulp Division, Weyerhaeuser Timber Co.

Secretary-Treasurer—Fred Armbruster, Great Western Division, Dow Chemical Co., Seattle.

Finance Committee—N. W. Brisbois, vice president in charge of operations, Fibreboard Products Inc., Stockton, Calif., and W. N. Kelly, manager, Longview, Wash., Mill, Pulp Division, Weyerhaeuser Timber Co.

Highlight of this meeting was that Albert S. Quinn, Vice President,

Stebbins Engineering Corp., Seattle, ended seven active and busy years as secretary-treasurer, turning over his books to Mr. Armbruster.

John Moak, master mechanic, Soundview Pulp Co., Everett, and Jim Fraser, superintendent, Coos Bay Pulp Corp., Coos Bay, Ore., were the nominating committee with Mr. Moak as chairman.

For the 1944-45 term, Mr. Alcorn, as second vice chairman, heads the membership committee. Mr. Quinn reported that the Pacific Coast Division has a paid-up membership of 103. Two members are in the service—Vern Tipka from Hawley Pulp & Paper Co., and Arthur E. Duke of Soundview Pulp Co.

TAPPI Pacific Section

● Clarence Enghouse, assistant resident manager, Crown Zellerbach Corp., West Linn, Ore., completing his year as chairman of the TAPPI section, presided at the men's luncheon and also the TAPPI business meeting. Elected for 1944-45:

Chairman—Erik Ekholm, general superintendent, Puget Sound Pulp & Timber Co., Bellingham, Wash.

Vice Chairman—Harold Bialkowsky, technical director, Everett, Wash., mill, Pulp Division, Weyerhaeuser Timber Co.

Secretary-Treasurer—Robert M. True, General Dyestuff Corp., Portland, Ore.

Executive committee—The above named officers and Z. A. Wise, Griffith Rubber Mills, Portland, Ore.

Mr. True, beginning his third year as secretary, stated that the consensus seemed to be that the TAPPI section should attempt to hold no more than two dinner meetings during the ensuing year because of wartime restrictions on travel, etc.

The business session unanimously indicated its approval of holding

one dinner meeting in Camas, Wash., in October and the other one in Everett, Wash., in February, 1945. This was identical with the two-meeting program as conducted during the 1943-44 regime.

It will be Mr. Bialkowsky's duty, as vice chairman, to arrange for Shibley Award competitive papers and other technical papers to be given at those two meetings.

Technical Papers

● At the morning joint technical session, presided over by Mr. Ekholm, C. A. Anderson, wood technologist of the Crown Zellerbach mill of Camas, Wash., discussed "Effects of Wood Variables and Chipper Damage on Pulp Quality," and A. S. Gerry, former chart room foreman (now sales representative) of the Everett, Wash., mill, Pulp Division, Weyerhaeuser Timber Co., presented a paper on "Graphical Records in a Modern Industrial Plant."

Mr. Anderson suggested that systematic segregation and usage of logs will aid toward attaining uniform pulp quality. He also stressed the desirability of reducing or eliminating the destructive action of present chippers on cellular structure of wood.

Mr. Gerry brought out the time-saving and other benefits made possible by the intelligent use of graphical charts in mills. The technique of utilizing such charts at his mill was described in detail, bringing out many interesting possibilities.

At the afternoon technical session, Henry A. Schmitz, Jr., representative of The A. O. Smith Corp., who made the trip to Portland from his headquarters in Milwaukee for the meeting, gave an informative talk on stainless steel and corrosion-re-



ABOVE ARE THE FOUR WHO PRESENTED TECHNICAL PAPERS (Left to Right):

GLEN KING, Shibley Award winner, now with Central Technical Dept., Crown Zellerbach Corp., Camas, Wash.; H. A. SCHMITZ, JR., The A. O. Smith Corp., Milwaukee, Wis.; C. A. ANDERSON, Crown Zellerbach Corp., Camas, and A. S. GERRY, Pulp Division, Weyerhaeuser Timber Co., Everett, Wash.



HERE AND THERE AT THE PORTLAND, Ore., Spring Meeting:

Top row (left to right): ALBERT S. QUINN, Stebbins Engineering Corp., Seattle, after seven years as Secretary Treasurer of the Superintendents Coast division, turns books over to his successor, FRED ARMBRUSTER, Dow Chemical Co., Seattle; RALPH REED, Chief Chemist & Mill Supt., Spaulding Pulp & Paper Co., Newberg, Ore.; CHARLES E. ACKLEY, Superintendent, Crown Zellerbach Corp., Lebanon, Ore., who was elected First Vice Chairman of the Superintendents; LOREN A. LaFOND, Sulphite Supt., Spaulding Pulp & Paper Co., Newberg, Ore.; Z. A. WISE, Griffith Rubber Mills, Portland, Registration Chairman and elected to TAPPI Executive Committee, and H. H. RICHMOND, Electric Steel Foundry Co., Portland, Convention Finance Chairman.

Lower row (left to right): M. THOM, Superintendent, Sidney Roofing & Paper Co., Ltd., Victoria, B. C.; WILLIAM R. GIBSON and HERMAN SIMPSON, Northwest Filter Co., Seattle, also representing Bristol Co., Buell Engineering Co. and other firms; H. A. "Gob" DES MARAIS, General Dyestuff Corp., San Francisco; P. J. McGUIRE, Oliver United Filters Inc., Oakland, Calif.; DOUGLAS ARMSTRONG, Asst. Supt., Oregon Pulp & Paper Co., Salem, Ore., and F. J. HAMILTON, Sulphite Mill Supt., Powell River Co., Powell River, B. C.

sistant applications. The subject of his talk was "The Use of Corrosion Resisting Alloy Linings in the Pulp and Paper Industry."

Mr. Schmitz, who has long specialized in the pulp and paper industry branch of The A. O. Smith Corp. business, which includes production of pressure vessels, kraft digesters and stainless steel lined tanks, was accompanied to the meeting by the company's Pacific Northwest representative, E. R. Barrett, White Bldg., Seattle. Being presented by a manufacturing concern, this paper was not eligible for the Shibley award competition.

Glen King presented his prize-winning paper on mill slime and control at this afternoon session.

Mr. King reported on the work done to control slime growth in the groundwood mills and on the newsprint machines at the Port Angeles, Wash., newsprint mill. He said the addition of steam to the groundwood mill systems brought temperature up to 125 to 135 degrees F. and proved satisfactory for cleaning. Mercury compounds have proven the only satisfactory chemicals for control, he held, due to the reactivity of groundwood pulp with most control chemicals.

His paper, published elsewhere in this issue, gives the results of laboratory testing of 47 chemicals along

with mill tests of the most promising ones.

These four technical papers given at the joint meeting are all to be published in this issue or in the July issue of Pacific PULP & PAPER INDUSTRY.

A surprise addition to the afternoon program was a hydraulic log barking roundtable described in more detail on page 18 in another article.

Men's Luncheon

● Mr. Enghouse, presiding at the men's luncheon, made a report on how donated mill felts have been used as blankets in war relief work in the British Isles.

He complimented the members of the convention committee on their work—namely, A. G. Natwick, B. A. Wise, H. H. Richmond, R. M. True and F. E. Alsop.

Walter W. R. May, Oregon City publisher, in the principal address, said that postwar public works programs tend to be too greatly emphasized in comparison with the private industry programs and urged that private industry act more aggressively to take leadership in the era of peace. He suggested that industries make use of market information developed by the Bureau of Foreign Commerce and of the seized enemy patents now held by

the Alien Property Custodian.

At the head table, besides Mr. Enghouse and Mr. May, were new and retiring officers of the two groups, Ed Wood, Fred Armbruster, Mr. Quinn, Mr. Natwick, M. Alcorn, Mr. Salmonson, Mr. Ekholm, Walter F. Holzer, Mr. Ackley and Mr. True.

Dinner

● The evening dinner was marked by a minimum of speechmaking. Mr. Quinn presented Mr. Natwick with a huge box, which, after numerous unwrappings, turned out to be holding one cigar.

Mr. Natwick read the message previously mentioned from Mr. Frampton and a telegram from Niles Anderson, vice president and manager, Marathon Mills of Canada, formerly a manager and superintendent in Coast mills, expressing his regret at being unable to join his old friends.

At the head table were Mr. and Mrs. True, Ray Smythe, Mr. and Mrs. Fred Alsop, Mr. and Mrs. Braun, Mr. and Mrs. Alcorn, Mr. and Mrs. Ackley, Mr. and Mrs. Salmonson, Mr. and Mrs. Ed Wood, Mr. Brisbois, Mr. Ekholm, Mr. Enghouse, Mr. Wise, Mr. Richmond and Mr. and Mrs. Natwick.

The final event preceding the dancing, was the presentation of the Shibley Award.



AT THE JOINT ANNUAL SPRING MEETING of Pacific Coast groups in Portland, Ore., June 3:

Top row (left to right): MRS. JANE LAMSER, Griffith Rubber Mills, Portland, Registrar of the convention; ROBERT M. TRUE, General Dyestuff Corp., Portland, Secretary-Treasurer of TAPPI, Pacific Section; A. G. NATWICK, Asst. Resident Manager, Crown Zellerbach Corp., Camas, Wash., General Chairman of the convention; HERMAN L. BERG, Technical Advisor, California-Oregon Paper Mills, Los Angeles ("stranded" by war in U. S. when he came here from Stockholm to introduce the Sveen Pedersen Save-All); E. A. WEBER, Sulphite Supt., Oregon Pulp & Paper Co., Salem; EDGE WENNBERG, Superintendent, Columbia River Paper Mills, Vancouver, Wash.; MRS. ROBERT M. TRUE and MRS. CARL E. BRAUN, wife of the Vice President and Mill Manager, Hawley Pulp & Paper Co., Oregon City.

Lower row (left to right): C. W. MORDEN, Morden Machines Co., Portland; RAY SMYTHE, representing Rice Barton Corp., William A. Hardy & Son, Heppenstall Co. and others, Portland; LEONARD McMASTERS, representing Astens-Hill Manuf. Co., Orr Felt and others, Portland; AUSTIN NICKELS, General Supt., Hawley Pulp & Paper Co., Oregon City, and Mrs. NICKELS; H. HOEHNE, Pulp Mill Supt., Longview Fibre Co., Longview, Wash.; L. D. McGLOTHLIN, Sulphate Mill Supt., Crown Zellerbach Corp., Camas, and J. W. SCHUH, Chief Elec. Engineer, Longview Fibre Co., Longview.

Hydraulic Log Barking Round Table Brings Forth Free Discussion of Problems

● The afternoon technical session had an added attraction—a hydraulic log barking round table. Carl E. Braun, vice president and mill manager of Hawley Pulp & Paper Co., was chairman and serving on the panel with him were Mr. Salmonson and Mr. Enghouse.

The discussion began with Mr. Braun and C. W. "Whit" Morden recalling attempts at Camas about 20 years ago to hydraulically bark logs with only 350 lbs. psi. A four-stage centrifugal pump and a traveling nozzle were used. But pressure was not strong enough to remove satisfactorily the inner bark.

A half a dozen men from mills and equipment companies participated in the round table. It was brought out that no other systems of hydraulic barking anywhere else in the world compare with the advances made in this field in the Pacific Northwest.

There were four different ideas for barking logs mentioned. Two "are on paper" and the other two in operation at the Weyerhaeuser Timber Co.'s mill at Everett and the Crown Zellerbach kraft mill in Port Townsend, Wash. These are whole log operations, described and illus-

trated, respectively in our May, 1943, and February, 1944, issues.

Some Northwest mills are planning long slab barkers, splitting down logs and running the slabs through a machine. This is one of the ideas "on paper." Another one, it was stated, is taking the entire log through a machine as it comes from the pond into the mill in a continuous flow operation. At Everett and Port Townsend the log is halted and fixed in a machine for the operation.

This "straight through" idea, as it was called, was said by one commentator to require a "tremendous amount" of horsepower.

A similar idea for small logs is now in operation in the east, requiring less water and power than would possibly be the demand for the big western hemlock. It was stated that this eastern "stream barker" operates with 650 lbs. psi. Two have been installed at Eastern Corporation in South Brewer, Maine, and others have gone or are going into four other Maine mills and two Pennsylvania mills.

It was stated that high pressure required for logs on the west coast

would demand 1,000 to 1,200 hp. motors.

There was discussion of different requirements in winter and summer or with logs with tight or loose bark. It was suggested that 800 gal. per min. and 1200 lbs. psi. might be required for clean barking in summer or on so-called loose bark, whereas higher amounts would be required in the winter.

The "ideal" barker, it was proposed, would be adjustable for different types of logs. It was pointed out that adjustments should be possible any time, because many western logs are taken from "cold decks" where loose and tight bark might be mixed. In the Everett barker pressure is 1400 lbs. psi. At Port Townsend it is 650 lbs. psi.

A serious problem, it was stated, is determining the point of fibrillation or feathering of logs hit by the stream, which varies according to type of logs. In slab barking, it was said, at a certain point in pressure and amount of water used, "you have speed for the asking." At this point, if speed is not utilized, it is a wasteful and inefficient operation. When this certain point is reached, "something should be done with gal-

lonage and power, "was the way the commentator made his point.

Critical Point Debated

● What the critical point usually was, became a subject of lively discussion. Those who participated appeared to agree that 60 to 70 gallons per minute per inch was the critical point.

How far can equipment go in presenting the log to the stream—or the stream to the log—was another expression of the key problem in hydraulic barking. The "end" point, it was concluded, depends on pressure, speed plus texture of fiber in the log.

It was suggested that installation of two different barkers in a mill might prove an efficient way of meeting this problem, the machines to be used alternately.

It was suggested, and most present seemed to agree, that variations required could be as divergent as 5,000,000 foot lbs. per second up to 20,000,000 foot lbs. per second.

There inevitably was a discussion of whether different requirements for kraft or sulphite mills should be considered as important. Of course, Port Townsend is a kraft mill and the Everett installation is for a sulphite mill. This much was agreed—everybody wants as clean logs as possible. A spokesman for one mill making experiments said that for unbleached sulphite, hydraulic slab barking might not do quite as clean a job as the old style mechanical barking. However, this speaker and others stressed that the all-important point was the savings in wood achieved by hydraulic barking. The mechanical method knocks off certain amounts of good wood.

More important, it was stated, hydraulically barking a whole log eliminated the breakdown and considerable loss of wood in saw kerf. With nearly all Pacific Northwest mills expecting to install hydraulic barking, savings would amount to possibly nearly 200,000,000 feet of wood per year.

Speed in barking by the new methods was stressed and it was stated that with certain equipment, a machine can clean 80,000 feet per hour.

The panel discussion was entirely informal, the participants being free to express views without their identities being reported.

REGISTRATION

● The following men were registered for the June 3 Spring Meeting held in Portland:

Abbott, O. C., Bristol Company; Ackley, C. E., Crown Zellerbach Corp., Le-



(Top): GLEN KING (left), formerly Research Chemist at the Crown Zellerbach newsprint mill, Port Angeles, Wash. (now in the company's Central Technical Dept., Camas, Wash.) receives \$50 Shibley Award check for best TAPPI paper of year on Pacific Coast from A. G. NATWICK, Master of Ceremonies at the TAPPI-Supts. Dinner, Portland, Ore., June 3.

Middle Row (left to right): JOHN F. HART, Chemist, Longview Fibre Co., Longview, Wash.; W. K. "Kern" HENDRICKS, Van Waters & Rogers, Inc., Portland; FRED ALSOP, Van Waters & Rogers Manager in Portland and member of Convention Committee; CARL FAHLSTROM, Asst. Resident Manager, Longview Fibre Co., Longview; and ROBERT HEUER, Pulp Division, Weyerhaeuser Timber Co., Longview, who helped put on 19 meetings in the west and in the Northern New York-Canadian division.

Lower row: Round Table Panel on hydraulic log barking developments (Left to right)—SAM SALMONSON, Soundview Pulp Co., the new Chairman of the Supts. Division; CARL E. BRAUN, Hawley Pulp & Paper Co., who directed the round table discussion; and CLARENCE ENGHOUSE, Crown Zellerbach Corp., West Linn, Ore., retiring Chairman of the TAPPI Section.

banon, Ore.; Alcorn, G. F., Pulp Division, Weyerhaeuser Timber Co., Everett, Wash.; Alsop, Fred, Van Waters & Rogers, Portland; Anderson, C. A., Crown Zellerbach Corp., Camas, Wash.; Anderson, Velden, Fir-Tex Insulating Board Co., St. Helens, Ore.; Armbruster, F. R., Dow Chemical Co.-Great Western Division, Seattle; Armbruster, D. B., Oregon Pulp & Paper Co., Salem, Ore.; Ballantyne, W. G., C. A. Finkbeiner Co.; Barrett, E. R., A. O. Smith Corp., Seattle;

Basom, Vern C., Fibreboard Products Inc., Port Angeles, Wash.; Baum, John,

Pacific Paperboard Co., Longview, Wash.; Berg, H. L., California-Oregon Paper Mills, Los Angeles; Blake, J. A., Electric Steel Foundry Co., Seattle; Braun, Carl E., Hawley Pulp & Paper Co., Oregon City; Bressler, Harry, Oregon Pulp & Paper Co., Salem; Breuer, Martin, E. I. Du Pont de Nemours Co., San Francisco; Brisbois N. M., Fibreboard Products Inc., Stockton, Calif.; Butts, E., Stein-Hall Mfg. Co., San Francisco; Cadigan, A. M., St. Regis Paper Co., Tacoma, Wash.; Chadwick, E. L., Magnis Chemical Co.; Christoferson, E., Sound-

view Pulp Co.; Clark, J. W., Longview Fibre Co., Longview, Wash.; Clark, W. W., Longview Fibre Co., Longview; Cleary, George, Oregon Pulp & Paper Co., Salem;

Coster, N. W., Soundview Pulp Co., Everett; Cox, J. V. B., Hercules Powder Co., Portland; Cranor, G. R., Oregon Pulp & Paper Co., Salem; Cunningham, George M., National Oil Products, Los Angeles; Daniels, H. N., Simonds Saw & Steel Co., Portland; Des Marais, H. A., General Dyestuff Corp., San Francisco; Doering, John, Pulp Div., Weyerhaeuser Timber Co., Longview; Drane, R. E., St. Helens Pulp & Paper Co., St. Helens; Dykstra, J. A., Hawley Pulp & Paper Co., Oregon City; Edwards, J. L., Crown Zellerbach Corp., Camas, Wash.; Ekholm, Erik, Puget Sound Pulp & Timber Co., Bellingham, Wash.; Eng-hause, C. A., Crown Zellerbach Corp., West Linn; Ericsson, E. D., Puget Sound Pulp & Timber Co., Bellingham; Erickson, A. E., Pulp Div., Weyerhaeuser Timber Co., Longview; Escher, Ed, Longview Fibre Co., Longview; Fahlstrom, Carl, Longview Fibre Co., Longview; Fear, L. G., Westinghouse Electric & Manufacturing Co., Portland; Fee, Chester A., Pacific PULP & PAPER INDUSTRY, Portland; Felthouse, D. G., Pulp Div., Weyerhaeuser Timber Co., Longview; Fowler, Jas., Guest; Francis, W. J. F., Pennsylvania Salt Mfg. Co. of Wash., Tacoma, Wash.; Fraser, J. D., Coos Bay Pulp Corp., Coos Bay, Ore.; Galloway, G. H., Crown Zellerbach Corp., Camas; Gard, Irving, Merrick Scale Mfg. Co., Seattle; Gardner, L. G., Hawley Pulp & Paper Co., Oregon City; Garrison, J. E., American Cyanamid & Chemical Corp., Seattle; Galteland, N. O., Tug Pacific Shipyard; Gerry, A. S., Pulp Div., Weyerhaeuser Timber Co., Everett;

Gibson, W. R., Northwest Filter Co., Seattle; Glen, Harry, Crown Zellerbach Corp., Camas; Graef, Al, Pulp Div., Weyerhaeuser Timber Co., Everett; Graham, C. H., Bumstead-Woolford Co.; Grant, T. H., Columbia River Paper Mills, Vancouver, Wash.; Gunhus, H. A., Simonds Saw & Steel Co.; Hamilton, F. J., Powell River Co., Powell River, B. C.; Harris, Jesse, Crown Zellerbach Corp., West Linn; Hart, John F., Longview Fibre Co., Longview; Hauff, H. A., Pulp Div., Weyerhaeuser Timber Co., Longview; Haugerod, Jan, Crown Zellerbach Corp., West Linn; Heintz, John, Pacific Paperboard Co., Longview; Heisner, T. N., Longview Fibre Co., Longview; Hendricks, W. K., Van Waters & Rogers, Portland;

Heuer, H. R., Pulp Division, Weyerhaeuser Tbr. Co., Longview; Hirschbuhl, Chas., Monarch Forge Co., Hoehne, H. F., Longview Fibre Co., Longview;

Holcomb, Clyde F., Thomas A. Edison Co.; Holzer, W. F., Crown Zellerbach Corp., Camas; Hudrik, Otto L., The Flox Co., Portland; Hyde, J. D., Crown Zellerbach Corp., Camas; Jacoby, W. C., Crown Zellerbach Corp., Camas; Jahraus, E. M., Oakite Products Co.; Jenkins, Joe, Hawley Pulp & Paper Co., Oregon City; Johnson, Jack, Appleton Woolen Mills, Portland; Johnson, Ray, Pulp Div., Weyerhaeuser Timber Co.; Everett; Jones, Lyal, Pulp Div., Weyerhaeuser Timber Co., Longview; Kaster, J. D., Oregon Pulp & Paper Co., Salem;

Keating, Dan J., Stauffer Chemical Co., Portland; Kertz, Ernie, John W. Bolton & Sons, Portland; King, Glen, Crown Zellerbach Corp., Camas; Lache, V., Hawley Pulp & Paper Co., Oregon City; LaFond, Loren A., Crown Zellerbach Corp., Lebanon, Ore.; Langsdien, E. E., Hawley Pulp & Paper Co., Oregon City; Lehman, R. M., Magnis Chemical Co.; Lindsley, A. R., Crown Zellerbach Corp., West Linn; Lineham, K. G., Crown Zellerbach Corp., Camas; Little, W., Crown Zellerbach Corp., West Linn; Long, J. G., Fir-Tex Insulating Board Co., St. Helens; Lorenz, Gus, Crown Zellerbach Corp., Camas; Lungreen, R. P., Soundview Pulp Co., Everett; McAllister, C. J., Simonds-Warden White Co., Portland; McCordy, A. C., St. Regis Paper Co., Tacoma; McGlothlin, L. D., Crown Zellerbach Corp., Camas;

McGuire, P. J., Oliver United Filters Co., Oakland, Calif.; McKay, F. A., Hawley Pulp & Paper Co., Oregon City; McKenzie, Frank W., Pulp Bleaching Co., Seattle; McMaster, Leonard, Astens-Hill Mfg. Co. and Orr Felt Co., Portland; Maaha, A. E., Pacific Paperboard Co., Longview; Maguire, Milton J., Hercules Powder Co., Portland; Marshall, Wm. C., Pacific Coast Supply Co., Portland; Mateil, Ralph, Crown Zellerbach Corp., West Linn; Merrick, H. G., Dicalite Co.; Mispely, R. G., Crown Zellerbach Corp., Camas; Moak, J. H., Soundview Pulp Co., Everett; Moffett, T. E., Hooker Electrochemical Co., Tacoma; Martig, Robert, Brown Instrument Co., Portland;

Morden, C. W., Morden Machines Co., Portland; Morgan, O. P., Pulp Div., Weyerhaeuser Timber Co., Longview; Morris, D. C., James Brinkley Co., Seattle; Murray, R. A., Columbia River Paper Mills, Vancouver, Wash.; Natwick, Ben E., Appleton Wire Works, Appleton, Wis.; Natwick, A. G., Crown Zellerbach Corp., Camas; Newcomb, Art, Crown Zellerbach Corp., Camas; Nickels, Austin, Hawley Pulp & Paper Co., Oregon City; Norman, S., War Production Board; Norwood, M. E., St. Helens Pulp & Paper Co., St. Helens; Osten-

son, Gus, Crown Zellerbach Corp., Camas; Palmer, Art, Crown Zellerbach Corp., West Linn; Peterson, H. T., Pulp Div., Weyerhaeuser Timber Co., Longview;

Petrie, R. T., Black-Clawson Co., Portland; Plankinton, J. C., Crown Zellerbach Corp., Camas; Pratt, Ralph K., Crown Zellerbach Corp., West Linn; Quinn, Albert S., Stebbins Eng. Corp., Seattle; Reid, Ralph, Hawley Pulp & Paper Co., Oregon City; Richmond, H. H., Electric Steel Foundry Co., Portland; Ricker, H. C., Pulp Div., Weyerhaeuser Timber Co., Everett; Rigg, W. D., Longview Fibre Co., Longview; Rivera, Raymond, Pulp Div., Weyerhaeuser Timber Co., Longview; Roake, E. J., Crown Zellerbach Corp., West Linn; Ruck, J. M., St. Regis Paper Co., Tacoma; Salmonson, S. A., Soundview Pulp Co., Everett; Salmonson, W. A., Simonds-Warden White Co., Seattle;

Sanford, Mark, Fibreboard Products Inc., Sumner, Wash.; Savage, Jack, Crown Zellerbach Corp., Camas; Sawyer, B. W., Portland; Schelton, W. F., Longview Fibre Co., Longview; Schmitz, Henry, A. O. Smith Corp., Milwaukee, Wis.; Schuh, John, Longview Fibre Co., Longview; Schweitz, E., Hawley Pulp & Paper Co., Oregon City; Shera, Brian, Pennsylvania Salt Mfg. Co. of Wash., Tacoma; Shirley, D. L., Electric Steel Foundry Co.; Sholdebrand, Carl, Hawley Pulp & Paper Co., Oregon City; Shouderback, Carl, Hawley Pulp & Paper Co., Oregon City; Simpson, H. N., Northwest Filter Co., Seattle; Smalley, J. F., Crown Zellerbach Corp., Camas; Smith, L. K., Pacific PULP & PAPER INDUSTRY;

Smythe, Ray, Rice-Barton Corp., Portland; Spencer, George, Hawley Pulp & Paper Co., Oregon City; Sporre, G., Stein-Hall Mfg. Co., Portland; Stribling, E. W., Oregon Pulp & Paper Co., Salem; Strommer, R. E., Longview Fibre Co., Longview; Sutherland, Virgil, Longview Fibre Co., Longview; Thom, M. W., Sidney Roofing & Paper Co., Ltd., Victoria, B. C.; Tidland, E. H., Pacific Coast Supply Co., Portland; True, R. M., General Dyestuff Corp., Portland; Van Beckman, W., Pulp Div., Weyerhaeuser Timber Co., Longview; Varney, Preston B., Pulp Div., Weyerhaeuser Timber Co., Longview; Vernet, H. A., A. E. Stanley Co.; Waddell, R. D., Crown Zellerbach Corp., Lebanon; Wagner, H. J., Pulp Div., Weyerhaeuser Timber Co., Longview;

Wall, Harold, Longview Fibre Co., Longview; Waltman, T. J., Ohio Knife Co., Portland; Wear, L. H., Taylor Instrument Co., Portland; Weber, E. A., Oregon Pulp & Paper Co., Salem; Welber, Fred, Hawley Pulp & Paper Co., Oregon City; Wenger, J. W., Crown Zellerbach Corp., Camas; Wenberg, E. N., Columbia River Paper Mills, Vancouver, Wash.; West, Rex, Longview Fibre Co., Longview; Weiyblen, Jack, Columbia River Paper Mills, Vancouver, Wash.; Wheeler, O. C., Crown Zellerbach Corp., Camas; Wilcox, J. A., Longview Fibre Co., Longview; Wilcox, J. M., Electric Steel Foundry Co., Portland; Wilkie, Peter M., Crown Zellerbach Corp., Camas;

Williamson, W. H., Shuler & Benninghofen, Portland; Wilma, D. D., Longview Fibre Co., Longview; Willson, M. A., Crown Zellerbach Corp., West Linn; Wilson, Albert, Pacific PULP & PAPER INDUSTRY, Seattle; Wilson, James A., Hawley Pulp & Paper Co., Oregon City; Wilt, J. B., Spaulding Pulp & Paper Co., Newberg, Ore.; Wise, Z. A., Grif-



(Left): HAROLD BLALKOWSKY, Technical Director, Everett, Wash., Pulp Division, Weyerhaeuser Timber Co., who was elected the new Vice Chairman of TAPPI, Pacific Section.

On his right are some of the men who were on hand at the Portland Spring Meeting (left to right): GEORGE MILLER, Resident Mgr., Columbia River Paper Mills, Vancouver, Wash.; TOM MOFFITT, Hooker Electrochemical Co., Tacoma; ROBERT T. PETRIE, Black-Clawson Co., Portland, and ED BARRETT, A. O. Smith Corp., Seattle.

fifth Rubber Mills, Portland; Wood, Edward P., Pulp Div., Weyerhaeuser Timber Co., Longview; Wray, L. F., Simonds Saw & Steel Co., Wyman, H., Crown Zellerbach Corp., Camas; Young, E. V., Columbia River Pulp & Paper Co., and Zirbel, H. A., Crown Zellerbach Corp., West Linn.

Women's Registration

Women in attendance and registered were:

Ackley, Mrs. C. E., Alcorn, Mrs. Gerry, Alsop, Mrs. Fred, Anderson, Mrs. Velden, Baird, Miss, Braun, Mrs. Carl, Clark, Mrs. J. W., Clark, Mrs. W. W., Doering, Mrs. John, Dudley, Mrs., Fahlstrom, Mrs. Carl, Fee, Mrs. Chester A., Galloway, Mrs. G. H., Galteland, Mrs. N. O.,

Ganty, Mrs. Prosper, Gard, Mrs. Irving, Gardner, Mrs. L. G., Gilbert, Mrs., Gare, Mildred Gunhus, Mrs. H. A., Harris, Mrs. Jesse, Hart, Mrs. John F., Hauff, Mrs. H. A., Haugerod, Mrs. Jan, Hendricks, Mrs. W. R., Hirschbuhl, Mrs. Chas., Hoehne, Mrs. H. F., Hudelik, Mrs. O. L., Imus, Miss Beverly,

Jacoby, Mrs. W. C., Johnson, Mrs. J., Keating, Mrs. Dan J., King, Mrs. Glen, Lacey, Mrs. Jack, LaFond, Mrs. Loren, Langsdon, Mrs. E. E., Little, Mrs. W., Lineham, Mrs. K. J., Long, Mrs. J. G., Lorenz, Mrs. Gus, McAllister, Mrs. C. J., McGlothlin, Mrs. L. D., McKenzie,

M. C. (MART) LARSEN, Manager, Chip and Box Board Department, Pioneer Division, The Flintkote Co., Los Angeles, and his family have gone all-out in the war effort. Three sons are in the service. Mr. Larsen, besides turning out paper boxes for war needs, is a senior air raid warden. Mrs. Larsen is busy at Hospital House in Los Angeles and assistant supervisor of Red Cross surgical dressings in her district.

Corp. Martin C. Larsen, Jr. (upper left) U. S. Army Aviation Engineers, has been through Tunisian and Italian campaigns. He was with Specialty Paper Box Co., Los Angeles.

Lieut. Glen M. Larsen (upper right) is a bombardier, U. S. Army Air Corps.

Lower row: Mother, father and Robert W., seaman 2nd class, Navy Hospital Corps.

Bob Petrie Returns;

Papermaking Changes Seen

● Robert T. Petrie, 3206 Northeast 42nd Ave., Portland 13, Ore., western representative of Black-Clawson Co., Shartle Bros., and Dilts Machine Works, returned in May from a trip to his headquarters offices in Middletown and Hamilton, O.

He reported considerable interest in the east in the development of continuous flow "push-button" methods of paper production, with equipment such as hydropulpers, and less use of beaters and jordan, wherever this is possible in mills. Extensive developments along this line after the war are foreseen.



AMONG THOSE AT TAPPI-SUPERINTENDENTS MEETING in Portland:

(Leet to right): BEN NATWICK, Appleton Wire Works, Appleton, Wis.; J. D. FRASER, Superintendent, Coos Bay Pulp Corp., Coos Bay, Ore.; MERRILL NORWOOD, Night Supt., St. Helens Pulp & Paper Co., St. Helens, Ore.; WILLIAM J. F. FRANCIS, Pennsylvania Salt Mfg. Co. of Wash., Tacoma, and WILLIAM C. MARSHALL, Pacific Coast Supply Co., Portland.

Mrs. Frank, McMaster, Mrs. Leonard, Marshall, Mrs. Wm. C., Montgomery, Mrs. Reva.

Morden, Mrs. C. W., Morgan, Mrs. O. P., Morris, Mrs. D. C., Mount, Mrs. G. H., Natwick, Mrs. A. G., Newcomb, Mrs. Art, Newkirk, Mrs. Ann, Nickels, Mrs. Austin, Norwood, Mrs. M. E., Ostenson, Mrs. Gus, Palmer, Mrs. Art, Peach, Mrs. Edith, Plankinton, Mrs. J. C., Pratt, Mrs. R. K., Reid, Mrs. Ralph, Rigg, Mrs. W. D., Roake, Mrs. E. J., Salmonson, Mrs. S. A., Savage, Mrs. Jack, Schuh, Mrs. John, Schweitz, Mrs.

E. Shaw, Mrs. George, Shelton, Mrs. W. J., Shirley, Mrs. D. L., Strommer, Mrs. R. E., Sutherland, Mrs. Vergil, True, Mrs. R. M., Varney, Mrs. Preston B., Waltman, Mrs. T. J., Weiyblen, Mrs. Jack, Wenger, Mrs. J. W.,

Wenneberg, Mrs. E. N. West, Mrs. Rex, Wheeler, Mrs. O. C., Wilcox, Mrs. J. A., Wilkie, Mrs. Peter M., Williamson, Mrs. W., Wilma, Mrs. D. D., Willson, Mrs. M. A., Wilson, Mrs. Albert, Winters, Mrs. Wood, Mrs. Edward, Wymore, Mrs. H., and Young, Mrs. E. V.



OPA Officials Quit

● William H. Swallow, of Seattle, head of the Raw Materials Section of the Paper and Paper Products Price Branch, U. S. Office of Price Administration, is planning to resign soon. He was formerly an employe of Rayonier Incorporated.

John M. Chandler, head of the Pulpwood Unit of the Raw Materials Section, resigned May 29. James T. Flannery resigned as head of the Waste Materials Unit in mid-June.

Hawley Barker Plant Application Is Made

● Application has been made to the War Department Engineering Corps, by Hawley Pulp & Paper Co., Oregon City, Ore., for a permit to construct a hydraulic log barking plant. Proposed is a frame building 68 by 54 feet, set on concrete piers with log ramp and conveyors, to be built in the lower (north) end of the Upper Basin of the Willamette River, adjacent to the company's No. 1 paper machine building.

Total cost is estimated at \$175,000, with \$100,000 of this devoted to machinery. Estimates set the rate of barking at a log a minute, or some 25,000 board feet per hour. Application has been made to the War Production Board for priorities.

Hartwig In East

● Otto Hartwig, general safety supervisor of Crown Zellerbach Corp., Portland, Ore., has been in Washington, D. C., for a meeting of the national committee for the conservation of manpower in war industries. Hartwig is Oregon chairman of the national association. All state chairmen from states in which war industries are located attended to discuss problems arising therefrom. Hartwig visited the Carthage, N. Y., plant of Crown Zellerbach Corp., before returning west.

Becker Announces Awards

Thirty thousand Norway pine seedlings planted on 30 acres of cutover land by 400 high school students in one hour flat was the highlight of the first Reforestation Institute held at Rhinelander, Wis., May 12 and 13, and sponsored by Trees for Tomorrow, Inc., an organization of the Wisconsin pulp and paper industry.

Folke Becker, head of the Rhinelander Paper Co., and president of Trees for Tomorrow, Inc., has announced that \$2,500 in scholarship awards would be given next year to high school students in the Wisconsin Valley interested in Forestry Schools. There will be five \$500 scholarships.

New Paperboard Allocations Control Explained to Southern California Group

Ed Tidland and H. J. Bolger present movies and Art Ponsford, regional editor for *Pacific PULP & PAPER INDUSTRY*, gives talk . . . Frank Wheelock succeeds William A. Kinney as PASC chairman this month.

● The term of William A. Kinney, production manager, Pioneer Division, The Flintkote Co., as the 1943-44 chairman of the Papermakers and Associates of Southern California comes to an end this month, with Frank H. Wheelock, board mill manager, Vernon, Calif., Division, Fibreboard Products Inc., slated to step into his place.

Closer control of the paperboard industry by the U. S. War Production Board was one of the subjects discussed at a well-attended April 20 meeting in the Rosslyn Hotel, Los Angeles. It was brought out how paperboard is now allocated under the authorization purchase plan of the WPB as well as wood pulp.

There were 57 members and guests present, including a large group of eight from Fernstrom Paper Mills who made the 65-mile trip from Pomona.

Ed Tidland, manager, Pacific Coast Supply Co., Portland, Ore., and his colleague from San Francisco, H. J. Bolger, attended the meeting and presented two motion pictures, "Two Related Industries" and "Hemlock Harvest." The first showed manufacture of Huyck felts; the second dealt with logging operations of Crown Zellerbach Corp. in the Northwest.

An off-trail subject, "Tales of the Tuna Clippers," was given by Arthur W. Ponsford, Southern California editor, *Pacific PULP & PAPER INDUSTRY*, which dealt with dramatic and spectacular adventures of tuna fishermen in shark-ridden tropical seas. The speaker has been the historian of this industry for more than 20 years.

Grover C. Brown of The Flintkote Co., discussed recent developments in the pulp and paper industry.

"The current news of the day continues to be dominated by the shortage of pulp wood, wood pulp, paper and paperboard and in many sections, waste paper," he said. "Although all branches of the paper industry are more or less hit by these shortages, the newspaper publishers, naturally, continue as the most vocal objectors to the existing conditions,



FRANK H. WHEELOCK, Board Mill Manager, Vernon Division (Los Angeles), Fibreboard Products Inc., who this month became the new Chairman of Papermakers and Associates of Southern California.

claiming that the allocation of pulps into other channels considered by the War Production Board as of primary importance in the war effort cuts the newsprint manufactured in this country during the first quarter by 20 per cent. However, the WPB is of the opinion that imports from Canada make up the difference.

"During the first and second quarters of 1944 closer control of wood pulp use authorization has been exercised by the WPB with strong emphasis on the end use of the products manufactured," continued Mr. Brown.

"The WPB has extended its authorization purchase plan to include paperboard as well as wood pulp. Under the allocation plan, individual consumers of paperboard and boxboard advise the WPB what quantities they had been getting in the past, what amounts they needed and the nature of their end uses. Purchase authorizations are not issued for greater amounts than can be met by available supplies and demands are adjusted by limitation orders. By this method of ascertaining total demand and total supply, and adjusting demand where necessary, WPB avoids issuing so-called 'hunting licenses' under which a

prospective purchaser can buy any such material he locates."

Mr. Brown said, "There seems little possibility of allocation of waste paper since this would be 'impractical and impossible to administer' according to Harold Boeschstein, Director of the WPB Forest Products Bureau."

Commenting on interest shown in the new sodium peroxide bleaching process for groundwood developed by the Electro-chemicals Department of E. I. du Pont de Nemours Co., Mr. Brown said: "It is claimed that the bleached product is comparatively stable to light and heat and possesses exceptionally good printing characteristics."

While dwelling on chemical developments, he mentioned the University of Washington Research Program, sponsored by the industry, originally announced about that state.

Ernie Kertz, John W. Bolton & Sons, Inc., Lawrence, Mass., presented a walnut gavel to the organization for use of the chairman.

Robert Baum, Fernstrom Paper Mills, as chairman of the nominating committee, submitted a roster of officers who will be seated at the June meeting.

Attending the April session were:

ATTENDANCE

Pioneer Division, Flintkote Co.—Otto Sass, N. C. Mann, Arno Nickerson, A. Eilersgaard, Frank E. Dilley, Stanley Peterson, John Van Ounsem, Glen Phillips, William Beeleman, J. J. Erchiel, Howard Bidwell, Grover C. Brown, W. A. Moore, Mr. Kinney.

Fernstrom Paper Mills—Charles G. Frampton, Richard Buckley, Robert A. Baum, Martin J. Bueker, B. G. Swanberg, M. Moss, J. E. Maurer, Martin A. Gyllbery.

United States Gypsum — J. E. Hartford, E. W. Odenwaldt, M. E. Campbell.

Pacific Coast Supply Co. — E. H. Tidland, Portland; H. J. Bolger, San Francisco.

Los Angeles Paper Box Factory—John Harhay, J. Gordon Slight, C. W. Adams.

The Dicalite Co. — Wm. R. Monette, A. R. Bollaert, Gordon G. Halvorsen. Stein-Hall Mfg. Co. — James Turek, Jr., San Francisco; Charles P. Linker, Los Angeles.

California-Oregon Paper Mills—Ernest C. Hill, V. P. Cole, Merle L. Dorman, A. H. Hatch, M. O. Sharman, A. L. Humber, A. H. Berg.

Philadelphia Quartz Co. — C. R. Kyle and C. E. Berneking.

Western Asphalt Association — Frank L. Mark.

National Oil Products Co. — George M. Cunningham.

The Adhesive Products, Inc.—Lloyd I. Ramsey.

El Rey Products Co. — Harold D. Brown.

Great Northern Paper Co. — J. W. Braley.

California Container Corporation—H. W. Aitchison.

General Dyestuff Corporation, San Francisco—H. A. DeMarais.

Blue Diamond Corporation — John D. Herbert.

Volney Felt Mills, Compton—Joseph P. Coleman, E. E. Harper, research engineer, and Mrs. Harper, Monrovia, Calif.

Belden Is Works Manager For Sorg Mill In Canada

● C. M. Belden, formerly of Pacific Mills, Ltd., and Abitibi Power & Paper Co., Iroquois Falls, Ont., is the new works manager for Sorg Pulp Co. at Port Mellon, Howe Sound, B. C.

Mr. Belden assumed his new duties recently following the sudden death of Herve D. Humphreys, who had been appointed to the post only eight months previously. Mr. Humphreys dropped dead while in the office of the company's counsel, R. H. Tupper, in Vancouver, B. C. Mr. Humphreys was with Dryden Paper Co. in Ontario for many years before coming to the Coast.

Mr. Belden was at Orea Falls for more than a year as townsite manager. He has had an extensive experience in the pulp and paper industry going back over a good many years. While with the Abitibi organization he was located at Espanola, Ont.

No successor has been named for Wayne Pendleton, who resigned in April as resident manager at Vancouver for the Sorg Paper Co.

The Sorg mill at Port Mellon is engaged in the manufacture of kraft which is shipped to the parent company, Sorg Paper Co., in Middletown, Ohio. Extensive improvements were made at the mill during the brief regime of Mr. Humphreys and of his predecessor, Herman Simpson. The sawmilling division of the enterprise has been under the direction of the Nelson Spencer organization.

Don Munro has been appointed superintendent of the sawmill, according to announcement by Loyd Edgett, manager of Nelson Spencer, Ltd. Munro was previously with Straits Lumber Co., Nanoose, and Industrial Timber Mills at Youbou.

Carey Buys Paper Plant

The purchase of the Wardlow-Thomas Paper Co. of Middletown, O., was announced recently by The Philip Carey Mfg. Company, Lockland, Cincinnati, O., and brings to nine the total number of plants now operated by Carey. Other manufacturing units are located in Hamilton and Middletown, O.; Perth Amboy, N. J.; Plymouth Meeting and Philadelphia, Pa.; and Lennoxville and East Broughton, Canada.

R. S. King, president of Carey, said the company has under consideration the manufacture of pulp and paper products for war use in Middletown. Ultimately this unit will produce building materials now manufactured in other Carey plants.

Dr. Peniston Joins U. of W. Research On Sulphite Pulp Mill Effluent

● An expert and augmented staff is now engaged in the University of Washington pulp mill effluent research program which is being financed largely by the twenty pulp and paper mills of the state of Washington.

As announced in our January issue, these mills are contributing a minimum of \$60,000 annually for five years to the research program to find economic uses for the chemicals in sulphite liquor or to find an economic method of neutralizing the liquor.

Latest appointment to the staff is Dr. Quintin P. Peniston. He was a graduate student under Dr. Harold Hibbert, at the Pulp & Paper Institute, McGill University, Montreal, from 1936-1939, and since then was engaged in research for the Corn Products Refining Co., Argo, Ill.

At the University of Washington, the project is administered by the committee on lignin and cellulose research in the graduate school, of which Dr. E. R. Guthrie is dean. Chairman of the committee on lignin and cellulose research is Dr. H. K. Benson, with other members including Professors B. L. Grondal, E. J. Ordal, G. B. Rigg, and H. V. Tartar. A. Bailey is in charge of lignin and cellulose research and W. L. Beuschlein and J. L. McCarthy are in charge of utilization studies of pulp and paper mill effluent.

Concerning lignin and cellulose research, Dr. Benson said, "Dr. Bailey and Mr. Owen Ward are engaged in full-time research in this division. This research project deals with a topic related to wartime uses and therefore cannot be discussed. In the postwar period it is expected that this division will continue with its fundamental studies of lignin relative to its chemistry and the reactions which it undergoes. As soon as available, additional investigators will be employed for studies in lignin chemistry."

Dr. Peniston's Record

The appointment of Dr. Peniston as research chemist on the pulp mills research was made by the Board of Regents of the University on May 20. Dr. Peniston will undertake his duties about July 15, joining Drs. Beuschlein and McCarthy in utilization studies.

Dr. Peniston was born in Seattle and attended the University of Washington from which he received the bachelor's degree in science. From 1931 to 1933 Dr. Peniston was a student at Massachusetts Institute of Technology in the school of chemical engineering practice. His thesis research conducted with Dr. W. K. Lewis was concerned with kinetics of rubber vulcanization. He received the degree of master in science in chemical engineering practice in 1933. From 1933 to 1935 Dr. Peniston was engaged as a research chemist by Rayonier Incorporated at Shelton, Wash.; and from 1935 to 1936 he held the position of chief chemist of the Coos Bay Pulp Corp. in Oregon.

His research at McGill was concerned with the isolation of lignin and the interrelationship of the chemical constituents of the cell walls of plants. He was granted the Ph. D. degree in 1939.

Dr. Peniston has published a number of papers dealing with the chemistry of sugars, cellulose, lignin and wood; and

his expert knowledge of this field should contribute greatly to the development of methods for the utilization of sulphite liquor.

These researches at the university are long range and it is not expected that results will be available at once, Dr. Benson pointed out. Progress or interim reports will be made semi-monthly and at such other times as requested by the mills committee, with final decisions on publication to be made by the university committee. Patents will become the property of the Foundation for Research at the University of Washington, with shop rights granted to all contributing mills.

Industry Sponsors New Mill Effluent Studies

● The National Council for Stream Improvement (of the pulp, paper and paperboard industries), Inc., 271 Madison Ave., New York, has announced establishment of a multiple industrial fellowship in Mellon Institute, Pittsburgh, that soon will begin operation.

The comprehensive research program of this fellowship, which will be conducted by specialists and for which the institute will provide complete facilities, will pertain to the development of satisfactory methods for the disposal and utilization of chemicals in pulp mill effluent.

Pollutive materials of the industries concerned will be investigated thoroughly with the objective of evolving novel and effectual methods for processing these materials, to secure values from them and to gain information of usefulness to individual companies in coping with their particular disposal problems.

It is thought at Mellon Institute that engineering advances in the future will bring better appliances for treating pulp mill effluent and that scientific investigation will uncover new uses for many materials. The institute's experts have stressed the point, however, that communities must also do their share by treating their sewage.

The organization is supported by contributions from pulp, paper and paperboard manufacturers, such contributors being assessed on a tonnage basis and representing the greater part of the total pulp, paper and paperboard produced in the United States.

The board of governors of the national council includes J. D. Zellerbach of San Francisco, president of the Crown Zellerbach corporation.

Russell Winget With Stream Improvement

Mr. Russell L. Winget, administrative assistant of the American Paper and Pulp Association, has resigned effective June 1, 1944, to become executive secretary of the National Council for Stream Improvement, Inc. Dr. Louis T. Stevenson of the association's staff will thereafter be in charge of statistics.

New St. Helens Mill Supply

● A new chipping plant has been installed at the Weyerhaeuser Timber Co. lumber division, Longview, Wash., and is now supplying fir chips to the St. Helens Pulp & Paper Co. Barges are towed up the Columbia to St. Helens, Ore., with the cargoes of chips.

The Honor Roll of Honor Rolls for Pa



Here are recorded the names of 48 employees reported killed or who died while in military service



(Left to right): U. Shrode, Jr., Fred Pashley, J. B. Franseth, L. M. Boren, J. Karbonski, Keith Frampton.

The following are those whose deaths have been reported:

	Cause and Place of Death	Position Held in Mill
BRITISH COLUMBIA PULP & PAPER CO., PORT ALICE, B. C.		
James Anderson Clark, Pilot Of. Royal Can. Air Force	Air raid over Europe	Electrician
E. Henry Pickering, Sgt. Observe, Royal Can. Air Force	Air raid over Europe	Bleacherman
COLUMBIA RIVER PAPER MILLS, VANCOUVER, WASH.		
James B. Franseth, Storekeeper, U. S. Navy Seabees	Embarcation accident, California	Stockroom Foreman
William Kenneth Nelson, 2d Lieut., U.S. Army Air Corps	Landing his plane at night, Calif.	Winderman
COOS BAY PULP CORP., EMPIRE, ORE.		
Herbert Plep, Mach. Mate, U.S. Navy LCT Division	Action at Salerno, Italy	Cutterboxman
Urban Shrode, Jr., U. S. Army Air Corps	Action at Bataan, Philippines	Millwright
CROWN ZELLERBACH CORP., CAMAS, WASH.		
James Elmer Buskirk, Pharmacist's Mate, U. S. Navy	Carrier Liscombe Bay, sunk, Gilberts	Backtender
Wayne Harwood, Sgt., U. S. Army Infantry	Action in New Guinea	Wood Sorter
M. B. Ludwig, Gunner, Tech. Sgt., U.S. Army Air Corps	Shot down in China	Cook's Helper
Joe R. Nash, U. S. Navy Fleet Air Wing	Illness, Wisconsin	Millwright's Helper
Albert Fritz Tews, Pvt., U. S. Army Infantry	Action in South Pacific	Laborer
Robert C. Tracy, Cadet, U. S. Army Air Corps	Airplane crash, Oklahoma	Various positions
CROWN ZELLERBACH CORP., WEST LINN, ORE.		
John Kabonski, Pvt., U.S. Army Anti-Tank Battery	Action in South Pacific	Grinderman



(Left to right): R. C. Tracy, Mike Ludwig, L. B. Conway, R. B. Traul, J. Azevedo, G. R. Metsker.

Pacific Coast Pulp & Paper Industry



men leave from Pacific Coast Mills
service. Also there are the names
of 13 others who have been report-
ed as missing.

Charles Alan Mayhew, Vice Presi-
dent and Treasurer, Sidney Roof-
ing and Paper Co., Ltd.



EVERETT PULP & PAPER CO., EVERETT, WASH.

Harold Baldwin, Sgt., U. S. Army	Action in Northwest Africa	On Finley Cutters
David Marr, Sgt., U. S. Army	Illness, California	Yard Department
Clarence C. Pendergass, Av. Mach. Mate, U.S. Naval Re	Carrier Liscombe Bay, sunk, Gilberts	Chipperman

FIBREBOARD PRODUCTS, ANTIOCH, CALIF.

John Azevedo, Pvt. 1st Cl., U. S. Army	Action in Italy	Box Mach. Operator
Alexander Cosmos, 1st Lieut., U. S. Army Air Corps	Flight over England	Corrugating Platemaster
Joseph Domingo, Staff Sgt., U. S. Army	Action in Italy	Stock Handler

FIBREBOARD PRODUCTS, PORT ANGELES, WASH.

William Henry Woodcock, U. S. Army	Action in the Solomons	Winderman
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FIBREBOARD PRODUCTS, SOUTHGATE, CALIF.

Fred Pashley, Pvt., U. S. Army Infantry	Action in Italy	Corrugator Operator
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FIR-TEX INSULATING BOARD CO., ST. HELENS, ORE.

Lafayette F. Farley, Pvt., U. S. Marines	Action at Tarawa	Truck Driver
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THE FLINTKOTE CO., LOS ANGELES, CALIF.

Frank J. Lehning, Jr., Sgt., U. S. Army	Maneuvers, Western United States	On Paper Machine
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INLAND EMPIRE PAPER CO., MILLWOOD, WASH.

C. Homer Goehri, Pvt. 1st Cl., U. S. Marines	Action at Bouganville	Grinderman
Carl Peterson, Corp., U. S. Army Air Corps	Bomber crash, Yukon	On Paper Machine

LONGVIEW FIBRE CO., LONGVIEW, WASH.

Keith Frampton, Capt., U. S. Army Air Corps	Killed parachuting, Bouganville	Technician
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PACIFIC MILLS, LTD., OCEAN FALLS and VANCOUVER, B. C.

John Harvey Edwards, Flying of., Royal Can. Air Force	Action over France	
Clifton Paul Kelley, 2d Lieut., Royal Can. Air Force	Plane crash at sea, Europe	
John G. Mackay, Flying Officer, Royal Can. Air Force	Action over Germany	
John R. Martyn, Sgt. Observer, Royal Can. Air Force	Action over Germany	
Arnold Belden Shives, Pilot Of., Royal Can. Air Force	Action over Europe	



(Left to right): H. Plep, Jim Woodill, Cecil Brown, C. Peter on, L. F. Farley, G. Navey.



(Left to right): W. Harwood, A. M. Smith, A. Cosmos, J. R. Nash, J. Domingo, J. C. Berg.

PARAFFINE COMPANIES, INC., EMERYVILLE, CALIF.

Richard B. Traul, Pvt., U. S. Army..... Action in Italy..... Linoleum Dept.

POWELL RIVER CO., POWELL RIVER, B. C.

Lucien Brooks, Flight Sgt., Royal Can. Air Force.....	Air Battle over Malta.....	Office Staff
A. M. Carey, Pilot Officer, Royal Can. Air Force.....	Ferrying over North Atlantic.....	Office Staff
H. Daubner, Flight Sgt., Royal Can. Air Force.....	Flying accident, Manitoba.....	Spare Crewman
W. Daubner, Flight Sgt., Royal Can. Air Force.....	Air battle over Frisian Islands.....	Mechanic
H. Freeman, Navigation Sgt., Royal Can. Air Force.....	Raid over Germany.....	Office Staff
W. Gilmour, Pilot Officer, Royal Can. Air Force.....	Flying accident, Scotland.....	Office Staff
S. P. Marlat, Flying Officer, Royal Can. Air Force.....	Flying accident, England.....	Office Staff
F. McMullen, Sgt. Pilot, Royal Can. Air Force.....	Flying accident, England.....	Pulp Tester
J. Morris, Pilot Officer, Royal Can. Air Force.....	Flying accident, England.....	On Paper Machine
R. J. Woodruff, Sgt. Pilot, Royal Can. Air Force.....	Air battle over Germany.....	Sawmill

ST. HELENS PULP & PAPER CO., ST. HELENS, ORE.

Glen R. Metzker, Lieut., U. S. Army Air Corps..... Flying accident, Oregon..... Various positions
Benjamin A. Scott, U. S. Navy..... Carrier Liscombe Bay, sunk, Gilberts On Towel Machine

WESTMINSTER PAPER CO., NEW WESTMINSTER, B. C.

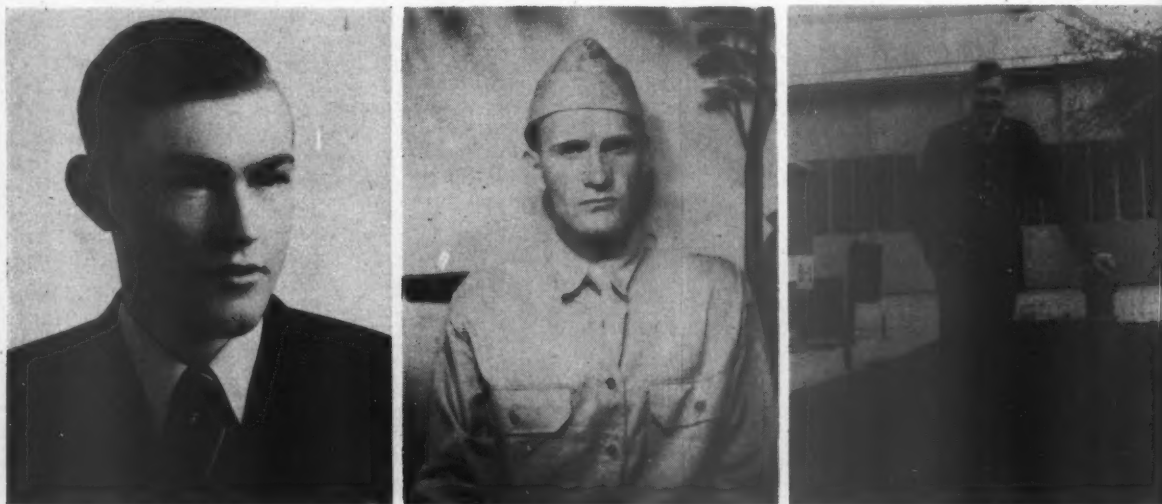
Cecil Brown, Sgt., Royal Can. Air Force..... Air raid over Germany..... Tissue Mach. Operator
Gordon Navey, Sgt., Royal Can. Air Force..... Flying accident, Scotland..... Tissue Mach. Operator

WEYERHAEUSER TIMBER CO., PULP DIV., EVERETT, WASH.

Donald Lynwood Knapp, Cadet, U.S. Army Air Corps..... Plane crash, Eastern United States. Yard Crewman

WEYERHAEUSER TIMBER CO., PULP DIV., LONGVIEW, WASH.

James Woodill, Aircraftsman, Royal Can. Air Force..... Flying accident, Alberta..... Chart Room



(Left to right): C. Pendergrass, Harold Baldwin, David Marr.



(Left to right): W. K. Nelson, Herman Goehri, Ford Babcock, W. H. Woodcock.

The following are those who have been reported missing:

	Where Reported Missing	Position Held in Mill
CROWN ZELLERBACH CORP., CAMAS, WASH.		
Jimmy Clark Berg, Mach. Mate, U. S. Navy (Sub.)	Submarine Wahoo in Pacific	Napkin Dept. Helper
Leonard Conway, 1st Lieut., Bomb., U.S. Army Air C.	Returning from mission in Pacific	Pipefitter
Delmar C. Johnson, 1st Lieut., Nav., U.S. Army Air C.	Raid over Germany	Various positions
FIBREBOARD PRODUCTS INC., VERNON, CALIF.		
Ford W. Babcock, Lieut., Bomb., U.S. Army Air Corps	Raid over Germany	Box Plant Stripper
Frank Carr, Pvt., U. S. Army	Somewhere in Italy	Printing Press Feeder
THE FLINTKOTE CO., LOS ANGELES, CALIF.		
Lee Masters Boren, 2d Lieut., U. S. Army Air Corps	Seaplane tender Langley, So. Pacific	Sample Dept.
HAWLEY PULP & PAPER CO., OREGON CITY, ORE.		
Albert Marshall Smith, 1st Lieut., U. S. Army	Action at Fiad Pass, Africa	Log Scaler
LONGVIEW FIBRE CO., LONGVIEW, WASH.		
Alexander W. Stewart, Lieut., U. S. Army Air Corps	Raid over Europe	Chemist
POWELL RIVER CO., POWELL RIVER, B. C.		
J. B. Allan, Sgt. Pilot, Royal Can. Air Force	Plane down in Germany	Barkerman
Rex Baum, Pilot Officer, Royal Can. Air Force	Raid over Germany	Office Staff
R. G. Leese, Sgt. Pilot, Royal Can. Air Force	Central Mediterranean flight	Various positions
F. Nello, Sgt. Observer, Royal Can. Air Force	On Middle East flight	On Paper Machine
SIDNEY ROOFING & PAPER CO., VICTORIA, B. C.		
Charles Alan Mayhew, Flying Of., Royal Can. Air Force	India Coast patrol flight	Vice Pres. & Treas.

JOBS FOR RETURNING SERVICE MEN

● Top executives of a number of pulp and paper industries have stressed the No. 1 "postwar plan" is to return service men to their old jobs or at least as good jobs.

In a letter to Pacific PULP & PAPER INDUSTRY, Dwight L. Stocker, president, Michigan Paper Co., and head of the U. S. Pulp Consumers Association, said "our first obligation is to provide work for our men returning from the service." The same view was voiced in messages we received from Ralph Hayward, president of Kalamazoo Vegetable Parchment Co., and Clark Everest, president of Marathon Paper Mills.

Giving specific and dramatic point to this recognized obligation is a letter written by J. E. Hanny, resident

manager, Crown Zellerbach Corp., Camas, Wash., to Cpl. Richard Horning, an employe on leave from that mill. Cpl. Horning wrote to Mr. Hanny, saying:

"Some of my friends here (in a Texas army camp) have expressed serious doubts as to whether my job will be awaiting me upon my return . . ."

Mr. Hanny promptly replied:

"Please assure the friends of yours, who have expressed serious doubts as to whether your job would be waiting for you when you return, that the corporation of which you are a part lives up to all of its obligations, and you know that your job or one equally as good will be given to you the minute you set foot in Camas."

Lucey is Manager at Rayonier Hoquiam Division; Eliel and Bagwill Handle Labor Relations at Three Mills



W. S. LUCEY (left), who returned to Hoquiam, Wash., as Resident Manager, Grays Harbor Division, Rayonier Incorporated. LYALL TRACY (center), remains there as Assistant Resident Manager. JOHN W. BAGWILL (right), who becomes Labor Relations Manager for the three Olympic Peninsula mills of Rayonier.

● W. S. Lucey has returned to Hoquiam, Wash., as resident manager of the Grays Harbor division of Rayonier Incorporated in that city.

Lyall Tracy, manager at Hoquiam during the past two years while Mr. Lucey was in the Seattle office, will remain as assistant resident manager.

Paul Eliel, well known Pacific Coast labor consultant, has joined Rayonier Incorporated as labor relations advisor to the three Pacific Northwest mills—in Hoquiam, Port Angeles and Shelton, Wash. (latter one idle).

John W. Bagwill, assistant under Mr. Tracy, will be Northwest mills labor relations manager and will work closely with Mr. Eliel.

Edward Bartsch, president of Rayonier Incorporated, in announcing these appointments on May 1, declared that "they are in line with the company's policy of not awaiting the end of the war to put into effect plans which will improve labor relations, industrial relations, plant operation and the quality of the company's product."

"We at Rayonier," said Mr. Bartsch, "are determined to build an industry which will fit happily into the community and civic life of Grays Harbor, and of which both this area and the company, may be proud."

Mr. Bartsch became executive vice president of Rayonier last fall just when a long standing jurisdictional dispute between CIO and AFL unions at the Hoquiam pulp and paper mill was reaching a crisis. He became president last January 27 in the midst of a 60-day strike arising from this dispute, which cost employees over \$300,000 in wages. Hundreds of thousands of dollars also were lost by the company and—more impor-

tant—much essential pulp and paper for smokeless powder and other vital products was lost to the Army and Navy. Since mid-February practically fulltime production resumed with employees returning to the AFL brotherhoods, whose bargaining rights were upheld in decisions by the War Labor Board.

In his Hoquiam reorganization and appointment of Mr. Eliel, Mr. Bartsch has acted aggressively to establish the highest possible standard of public and labor relations. To PACIFIC PULP & PAPER INDUSTRY, he stressed the high regard which both labor and management have for Mr. Eliel.

A New Personality

Mr. Eliel's appointment brings a new face and personality into the Pacific Coast pulp and paper industry picture—but not an unfamiliar one. Several managers and executives of west coast mills have attended one or more of the industrial relations conferences held at Stanford University, where he is in charge of the Division of Industrial Relations of the Graduate School of Business.

He also is serving as chairman of the Pacific Coast Maritime Industry Board, War Shipping Administration. He brings to Rayonier a long and varied experience in handling labor problems. Other positions he has held include director of industrial relations, Industrial Association of San Francisco, and member of the advisory council, United States Employment Service.

Mr. Eliel is 54 years old and was born in Chicago. He graduated from the University of Chicago. He is married and has three children. The oldest is a son

who is a doctor in the U. S. Navy, with rank of Lieutenant (jg).

Mr. Bartsch said Mr. Eliel's appointment was in line with a policy of maintaining and developing a close and understanding relationship between employees and management.

Mr. Bagwill, a graduate of the University of Washington in the mid-twenties, is "by his ability and experience, well qualified to assume his new duties," said Mr. Bartsch. "We all recognize that a better relationship between employees and management is the cornerstone to success of the really free enterprise which all of us desire."

Mr. Eliel will continue to make his residence in California. Mr. Bagwill will continue to live in the Grays Harbor city.

Mr. Eliel's Views

● Some time prior to his appointment, Mr. Eliel gave expression to some of the points in his philosophy on labor relations in a foreword which he wrote for a book.

Among other things, he stated that "the indispensable ingredients in any successful industrial relations program, in any of its aspects, are candor and honesty as between the parties."

"The successful employer-employee relationship," continued Mr. Eliel, "also has implicit within it acceptance of the principle that there is a mutuality of obligation and responsibility that in the successful enterprise continually flows through well worn channels in both directions; from the top down and from the bottom up; and that neither direction of movement is of greater importance than the other."

Other views which Mr. Eliel expressed were the "consideration of a business as

a social institution as well as an organization designed to carry out economic objectives," and the opinion that businesses should guard against being "pretentious" with employees.

He made the above editorial comments in a foreword written for a book by Alexander R. Heron, vice president on leave from Crown Zellerbach Corporation, entitled "Sharing Information with Employees." Mr. Eliel contended that "sharing" of information was "personal" and more to be desired than "conveying" information, which he contrasted as "mechanical."



IN EAST-WEST SALES MERGER—(Left to right): H. H. RICHMOND, Chief Engineer, Electric Steel Foundry Co., Portland, Ore.; C. B. NYMAN, designer of the Swenson-Nyman multi-stage washer, and J. M. WILCOX, Engineering Dept., Electric Steel Foundry Co. Mr. Nyman's headquarters are at Swenson Evaporator Co., Division of Whiting Corp., 6319 Kenwood Ave., Harvey, Ill.

ESCO and Swenson Evaporator Co. Join Hands In international "Reciprocal Trade Pact"

● A significant development of recent weeks is the announcement that Electric Steel Foundry of Portland, Ore., and Swenson Evaporator Co., of Harvey, Ill., have executed an agreement under which ESCO will have exclusive sales representation for the Swenson Co. in Western United States and Canada, while in Eastern United States and Canada Swenson will represent ESCO in the sales of ESCO pulp mill and chemical plant equipment.

Thus a "reciprocal trade agreement" is set up which joins the efforts of two leaders and pioneers in the field of specialty engineering in pulp and allied industry equipment.

For many years ESCO has enjoyed a topflight reputation in the West in design and production of stainless and alloy steel cast and fabricated products for the special and exacting requirements of pulp mill service. ESCO pioneered many innovations in material and design which were important milestones in the advance of the industry. One was ESCO's introduction of stainless steel to the industry in the early thirties. Stainless steel proved incomparable for resistance to heat and corrosion and a solution to one of the pulp industry's biggest headaches. The unusual makeup of the ESCO organization has been back of all its achievements. ESCO is more than a mere foundry today though the foundry was and is its foundation. It is an organization made up of specialists in engineering and metallurgy who work with the problems of many industries. Since the coming of World War II these talents have been turned to account in the war effort. Valves for the Navy and Maritime Commission, special ship castings of all descriptions and machine parts for other war plants have been part of wartime production at ESCO, and these were added to the normal production of ESCO's regular products which were also needed in the war. Construction equipment was produced for the building of fortifications, bases, new plants and miscellaneous military establishments the world over. Many an ESCO job has been in an emergency when great things depended upon un-

precedented speed and accuracy of its accomplishment. Such a job was the turning out of numerous special pipe fittings for Liberty ships on short notice at the beginning of America's giant cargo ship program in the earlier and darker days of the war. Another was the building of what is called the biggest plate rolling machine in the world for one of the Kaiser shipyards. Two such machines were produced. For these achievements, the Navy "E" with three white stars flies over ESCO's plant.

Forward looking ESCO men have brought about the construction of a centrifugal foundry plant equipped for production of aircraft castings in precisely controlled alloy steels in addition to centrifugally cast pipe.

The Swenson Evaporator Co., which is a division of Whiting Corp., has long been a leader in design and building of evaporators, filters, crystallizers, causticizers, thickeners and kindred types of equipment for use in chemical, pulp and similar industries. The company, founded by Magnus Swenson, has been engaged in manufacture of chemical equipment for over 50 years.

ESCO and Swenson were attracted to one another by reason, to a large extent, of their mutual activity in the production of such things as heat exchangers, juice extractors, cheese pasteurizers, pineapple pulping and juice extracting equipment, nearly all involving high sanitary requirements and the use of stainless steel.

The two companies, foresee that their collaboration will be reflected in greater efficiency and economy and in service to customers.

Sutherland Receives Degree

● Mayor Louis W. Sutherland of Kalamazoo, Mich., received the honorary degree of Doctor of Laws (LL.D.) at the 108th annual commencement exercises at Kalamazoo College June 12, 1944. His many friends in the paper industry know Mr. Sutherland as the Chairman of the Board of Directors of the Sutherland Paper Co., a business which he founded in 1917. The original company has grown to an organization of 2500 employees, producing paperboard, packages and specialties.

Dave Brittain 'In Army

David Brittain, who was employed for five years in Everett and Longview, Wash., pulp mills and more recently has been representative of the Mead Sales Company, Inc., in Chicago, is now on leave from that position in the armed forces. George H. Fay is the Chicago representative in his place.



COMDR. HAROLD D. CAVIN, USNR, Commander of the (100th) Century Battalion of the Seabees, shown here after he arrived in the South Pacific. He is Resident Engineer on leave from Puget Sound Pulp & Timber Co., Bellingham.

He recently wrote of what his Seabees battalion accomplished in one month: "We now have a 6,000 ft. bomber runway, camps, galleys and office facilities for thousands (I can't tell you how many), all water lines, communications, shore defenses, paved roadways, fleet facilities, etc. We are making regular strikes on adjacent Jap-held islands by bombers.

"I can hardly realize that men can be endowed with a spirit to put forth so much effort. If I had this outfit on a pulp mill job I'd really make a record."

Newsprint Mill Has Perpetual Supply Of Timber, Pin Dinner Audience Is Told



RAYMOND A. DUPUIS, Resident Manager of the Port Angeles, Wash., Division of Crown Zellerbach Corp., proudly presents a thirty-year service pin to his father, LEON L. DUPUIS, General Superintendent at the same mill. The latter is a brother of the late D. E. DUPUIS, former Manager of the Ste. Anne Paper Co., Beaufort, Quebec.

● Unequivocal statements by the principal speakers that there will be a perpetual supply of timber feeding the Port Angeles, Wash., Division of Crown Zellerbach Corp., highlighted a service pin-awarding dinner held in the Olympic peninsula city for employees of that division.

However, the dramatic and sentimental climax of the affair, held in American Legion hall on May 4, was a father-son ceremony.

Raymond L. Dupuis, resident manager of the division, presented a 30-year pin to his father, Leon L. Dupuis, general superintendent.

Henry Leslie Day, office manager, was awarded a 25-year pin. There were 143 others awarded for lesser periods of employment.

"You can be sure that you always will see tugs coming around Ediz Hook with log booms for the paper mill here," said Charles Nichols, assistant logging engineer for the Crown Zellerbach Corp.

He said Neah Bay timber holdings of the corporation—at the extreme northwest point of continental United States—bolstered with reforestation operations now being conducted, will insure the logging of 42,000,000 feet (about 75,000 cords) annually in that area. Other timber holdings of the corporation bring the amount that can be cut annually up

to an adequate supply, Mr. Nichols said.

Daily production capacities of the Port Angeles division are 370 tons of pulp (310 mechanical and 60 unbleached sulphite) and 355 tons of newsprint.

Welsh Discusses Plans

● William D. Welsh, from the San Francisco headquarters of Crown Zellerbach Corp., who came back to his old home town to serve as toastmaster of the dinner, said the corporation is planning for perpetual operations and that research men are constantly finding new uses for pulp. As the former editor of the Port Angeles Evening News, he stressed the importance of newsprint produced at the mill in this period of hard going for newspapers everywhere.

"We all must take part in the great task of helping the boys who

return from the war to their old jobs to adjust themselves to new conditions," said Mr. Welsh.

Guests at the dinner included William Breitenbach, resident manager, Port Angeles division, Rayonier Incorporated; Verne Basom, resident manager, Port Angeles division, Fibreboard Products Inc.; E. H. Vickery, engineer for Rayonier Incorporated, and H. J. Goodrich, logging superintendent of the Crown Zellerbach Sail River camp.

Names of the 20-year pin winners are listed below their group picture on this page.

Following are names of other pin winners:

Fifteen years' service — William C. Adams, Joseph Adamich, George H. Albers, Sherman A. Angevine, Ellerd E. Bailey, Asa J. Baker, Harold E. Baxter, John M. Becker, Frank Bell, Eugene G. Blais, *Merlin C. Bovy, Frank Bukovnik, Harvey A. Caulkins, *Mark Cole, Alfred P. Conrad, Ersilio P. Di-Cola, Floyd J. Dixon, John G. Ervin, Ralph H. Flora, Calvin L. Foster, Moyle J. Frost, Leon F. Gamache, Alexis O. Gosselin, Paul E. Gosselin, William D. Grant, Frank L. Halstead, Herman Heller, Harry E. Higdon, Henry L. Hopf, Frederick G. Knott, Herbert J. Levick, S. Elmo Loghry, E. Claire McCormick, John C. McHone, Joseph C. Mowbray, Lyle J. Ninemire, *Edward A. Provo, Wilfred A. Rivetts, John W. Roberts, Raymond E. Stewart, Adam J. Suslick, Earl D. Watson.

Ten years' service — Hilman M. Aal, Herbert J. Aliers, Robert W. Allen, Arthur C. Anderson, Raymond C. Austin, John H. Beaver, Donald H. Brown, *Wayne W. Brown, William E. Brown, Jesse W. Byers, Ladd B. Byers, Nicolas Chryst, John S. Davis, Henry Dion, Earl Fox, Donald H. Frodole, George S. Grant, Bert D. Hampton, Allen J. Hilt, Edwin L. Howard, Robert H. Hope, Robt. P. Hutchinson, Frank M. Hutchison, Harry C. Iler, N. Ernest Jacobs, Ira O. Jacobs, James O. Jacobs, Nels H. Johnson, Leo A. Kaliaredes, Orval E. Kepford, N. Clyde Knight, Clarence G. Knott, Curtis F. Laib, A. Joseph LeClair, Wilbur J. Lowndes, Roddy M. Martin, Larry P. McDonald, Ernest R. Morgenthaler, Chester D. Newberry, Peter Nielsen, Arthur E. Pearson, Raymond S. Porter, Guy M. Rayburn, Emery W. Rayment, Roy M.

SULPHITE MILL AT PORT ANGELES REOPENS

● The sulphite mill of the Port Angeles, Wash., division of Crown Zellerbach Corp., shut down since October 8, 1942, resumed operations on April 17.

The normal capacity of the mill which has two digesters and two wet machines, is 60 tons daily of unbleached sulphite, used with the mechanical pulp produced at the same plant in production of newsprint. One of the three paper machines is still down.

During the shutdown, the Port Angeles plant obtained supplies of sulphite from the West Linn, Ore., and Camas, Wash., divisions of Crown Zellerbach Corp.



SERVICE PINS WERE AWARDED TO 145 EMPLOYEES at the Port Angeles, Wash., Division of Crown Zellerbach Corp., on May 4. These are pictures taken at the event. In upper photo, left to right, are 20 employees who received 20-year pins. They are (left to right): Matthew L. Rauch, Groundwood Supt.; Lorena M. Kemp, Secretary to the Manager; Gilbert Hudson; August C. Hohensee, Mill Paymaster; Alexander G. Pappas; William D. Rowland; Norman E. Tracey; Howard M. Grimes; Errett R. Fleener; Elmer H. Gribble; Peter C. Kallas; George W. Hansen; Clarence Baugh; John C. Hall; George C. Johnson; Carroll D. Neer; Martin H. Olson; Vernon R. Phillips; Paul M. Neer and John M. Reiners. Ten other 20-year winners who were unable to attend were William M. Locke, Steam Engineer, on leave in the Coast Guard; Niels Larson, also in the services; Moses Doyle; Ernest Gamache; William Jordan; Richard Marsura; Hugh McAllister; Harry Stringer; Lewis Waugaman and Oscar Winkler.

In the lower photo, the speakers' table is the right background. The ten persons seated at that table and facing the other tables are (left to right): C. V. Basom, Resident Manager, Fibreboard Products, Port Angeles, Wash.; Jack Henson, Editor, Port Angeles Evening News; H. J. Goodrich, Superintendent, Crown Zellerbach Neah Bay Division; R. A. Dupuis, Resident Manager, C. Z. Corp., Port Angeles Division; W. D. Welsh, C. Z. Executive Assistant, San Francisco; Charles Nichols, Asst. Logging Engineer, C. Z. Corp.; Leon L. Dupuis, Superintendent, C. Z. Corp., Port Angeles; E. H. Vicary, Supervisory Engineering, C. Z. Corp.; H. L. Day, Office Manager, C. Z. Corp., Port Angeles, and W. E. Breitenbach, Resident Manager, Rayonier Incorporated, Port Angeles.

Those at first table in foreground, nearest camera (left to right): E. R. Fleener, Chief Electrician; V. R. Phillips, Pipefitter; D. H. Frodler, Timber Dept.; G. C. Johnson, Hydroelectric Plant; William Bauer, Mechanic; Martin Olson, Mechanic; F. L. Halstead, Electrician; C. D. Neer, Paper Machine Tender; J. M. Reiners, Boss Machine Tender; B. D. Hampton, Electrician; C. W. Lockhart, Mechanic; O. A. Wohlsein, Relief Man, and J. C. Mowbray, Electrician.

Second table near camera—only those facing camera (left to right): H. J. Stringer, Janitor; W. E. Brown, Slasher; I. O. Jacobs, Trucker; H. C. Iler, Hydroelectric Plant; Fred Pontin, Portland Office, C. Z. Corp.; E. L. Howard, Chief Accountant, C. Z. Corp.; J. J. Gaudina, Office Manager, Charcoal Division, Seattle; O. S. Cauvel, Sulphite Superintendent; L. F. Spicer, Accountant, and Mrs. L. M. Kemp, Executive Secretary.

Sharp, Oscar W. Stigen, Sabino Stramaglio, Edmond H. Tennis, Martin O. Wick, Leonard B. Williamson, Gust T. Wilson, Otto A. Wohlsein, Theodore A. Wohlsein, George S. Wood, Leslie G. Wright.

Five years' service — William Bauer, William E. Beech, Helen M. Bowden, Merle J. Buchloz, James J. Gaudina, *E. Paul Gillespie, Glenn E. Hanchett, Charles W. Lockhart, Oliver K. McGregor, *Russell B. Newell, James P. Phillips, *Roddy L. Rauch, Francis W. Robinson, Lewis F. Spicer, Lawrence L. Symmonds, Ralph D. Woods.

*On leave of absence for military service.

Cashman Now a Lieut.; Others Home On Leave

● Lieut. (jg) Merrill Cashman, U. S. Coast Guard Reserve, on leave as personnel and safety supervisor of the Crown Zellerbach newsprint mill at Port Angeles, Wash., had a brief furlough at home in late May between an indoctrination course in Florida and sea duty on the Pacific. Jim Phillips is carrying on in his position at the mill.

CPO Charles Homer of the "Seabees," an electrician on leave, had a 30-day furlough in Port Angeles from the Aleutians. In Alaska he met his brother Claude, who is in the Army and on leave as an operator from the Port Angeles mill's hydroelectric plant. In May Claude was hospitalized in Spokane with a brok-

en leg. The brothers have both been C.Z. employees for more than 17 years.

Another Navy Seabee home on leave was Moresby Wright, backtender on No. 3 paper machine.

Hammond In OPA Group

A gumming industry advisory committee appointed by OPA and announced from Washington, D. C., on May 2, includes A. S. Hammond, manager of Western Waxed Paper, North Portland, Oregon.

Collier Has Operation

Sid Collier, assistant superintendent, Puget Sound Pulp & Timber Co., underwent an appendix operation June 6 and his wife, Helen, reported a few days later that he was coming along fine.

319 Crown Zellerbach Employees Given Service Pins at West Linn and Camas

● On May 8 and May 9 respectively, Crown Zellerbach Corporation honored 126 employees at the West Linn, Ore., division, and 193 employees at the Camas, Wash., division with service pin presentations.

Speakers and other participating officials, other than those representing the local mills, were identical at both evening ceremonies.

Louis Bloch, chairman of the board and himself a recent recipient of a 50-year service pin, made the pin presentations. Much to his surprise he found himself outranked in point of service by Otto Erickson, who took a good deal of delight in welcoming Mr. Bloch into the Fifty-Year Club at West Linn.

Albert Bankus, vice president, San Francisco; Frank Youngman, vice president, Portland, Ore.; Frank Drumb, director of industrial and public relations, San Francisco, who gave the principal address; W. D. Welsh, executive assistant, San Francisco, who was master of ceremonies; Joseph Frum, assistant vice president, Portland; and Otto Hartwig, general safety supervisor and social security advisor, Portland, attended both ceremonies.

C. E. Bruner, resident manager, in opening the West Linn ceremonies, said that 85 per cent of all employees at the mill held service pins which denoted five years or more of service. Mr. Bankus told of the pleasure he experienced in meeting with the 35-Year Club because part of his experience had been derived at West Linn. He then started a 30-minute discourse on "Technological Advancements in Paper Making," but relinquished the time when he discovered he was reading the speech Billy Welsh was supposed to make. Mr. Welsh, in presenting Mr. Drumb praised the more than 600 employees at West Linn who wear pins and suggested it would be hard to find a comparable record any place in the United States, especially during this period of the greatest labor migration in the history of the country.

Mr. Drumb, in his address entitled "The Industrial Highway," said in part: "A service pin is a milestone on an industrial highway. The first milestone may be a very important one. If an employee makes a mistake in choosing his employer, it is a mistake. As we pass that



VIEWS AT THE CAMAS, WASH., and WEST LINN, Ore., Pin Dinners for Crown Zellerbach employees.

Top row (left to right): FRANK A. DRUMB, Director of Industrial and Public Relations, who was principal speaker at both affairs; LOUIS BLOCH, Chairman of the Board, welcoming OTTO ERICKSON into the 50 Year Club at West Linn. (Mr. Erickson retired three years ago after completing his 50 years of employment).

Lower row (left to right): RAY WADSWORTH, who told of his experiences in 18 months military service in Africa and Italy; MRS. ROBERT D. O'HARA, MRS. JAMES M. BUSH, MRS. FORREST WILLIAMS, MRS. MARGARET A. COCHRAN, and MRS. CLARA OSBORNE (behind her, obscured, is MRS. DONALD E. PERSON), wives of Camas employees in military service who also received company service pins.

first hurdle after five years we have sown many of the seeds of our industrial careers. As we pass the ten-year milestone, we are really getting our teeth into the organization; at fifteen years we start looking condescendingly back upon the beginners."

He declared Crown Zellerbach employees had chosen their employees wisely. The company, he said, is expanding its markets and "building a firm foundation for the future."

Mr. Bloch, before presenting the pins, said, "the first paper mill I ever saw was Mill 'J,' a few hundred yards from where we sit now. There has been progress in paper-making. There have been happier results in the development of organizations. I found my first job in

a little Crown Zellerbach paper mill in San Francisco. I'm just as much an employee as anyone else in this mill. I hope you will feel a personal pride and the humble satisfaction I felt when I received my pin."

Among others at the head table at West Linn were Mr. Erickson and Merritt Wilson, mill purchasing agent and the mayor of West Linn.

Camas Meeting

● At Camas on May 9, J. E. Hannay, resident manager, opened the ceremonies by calling the presentation of pins "a policy and a tradition." He said members of his organization had received 1500 pins for five years or more of service. Relative to the newly formed Twenty-Five Year Club at Camas, he

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THE FINEST AND MOST DURABLE DYESTUFFS
KNOWN

Dye Corporation

Camera's Eye Catches Act of Literary Larceny!!

said 84 had signed the original charter, but 101 employees were members, "representing 2,525 years of service." "All of you," he added, "keep the wheels running during these trying times."

Mr. Welsh, told of a special pin presentation by Mr. Bloch to Robert H. Russell, a forty-year employee, who was at the Permanente Hospital, Vancouver, Wash.

Among introduced guests at Camas, besides civic officials, were Cecil Dilling, manager of Western Wax Paper Co., Portland; E. H. Bickering, chief engineer, Port Angeles, Wash.; William E. Barber, director, Central Technical Laboratory, Camas; A. G. Natwick and George Charters, assistant resident managers; Albert Bankus, vice president, San Francisco; Mrs. Vera Berney, women's personnel director, and Axel Brandstrom, chief forester, Crown Zellerbach Corp.

Ray Wadsworth, a veteran of 18 months' service overseas, spoke on behalf of the men in service, telling of his experiences in the Mediterranean area.

Mr. Bloch and Mr. Drumb made addresses similar in text to those of the previous evening.

CAMAS SERVICE PINS

Forty-five years service—Ernest F. Wendt.

Forty years—Robert H. Russell.

Thirty-five years—E. H. Tidland.

Thirty years—Edward P. Barthelemy.

Twenty-five years—Eugene C. Allen, Justin H. Clark, Burr E. Grippen, Osmond T. Defieux, Martin I. Devlin, Sherwood D. Dorman, John T. Hunter, Frank L. Lee, William Linder, Charles J. Meredith, Arthur Newcomb, William Shadel, Marta Smith and Ward Woung.

Twenty years—Elbert A. Butler, Sam Drichas, Frank Dunn, Clarence Esser, Hugh J. Fleming, Roscoe A. Fry, Daniel T. Grover, N. N. Hagensen, Walter S. Hansen, William J. Knauf, Joseph A. Lambert, Raymond F. Miller, Carson B. O'Dell, William A. Purdy, Elmer Simpson, Nicholas Skamnias, Jason E. Smith, Christ Stanoff and Arthur W. Warren.

Fifteen years—Henry E. Alder, Lola M. Alder, Clarence A. Anderson, Jessie Burns, Paul Carras, Clifford E. Carter, George W. Charters, Margaret A. Cochran, Ronald Corey, Gerald F. Craig, Virgil P. Crumpacker, Albert B. Cunningham, Ernest M. Curry, Walter J. Friberg, Leslie Golladay, Lincoln E. Guyl, Carl Herman, Henry Husby, Virginia Jensen, Alma Kirkpatrick, Ray L. Koski, Ben Lethlean, Kenneth Lowther, Mary McLean, Elsie Neel, Dale C. Newman, Earl H. Newman, Arthur J. Paris,



This "exclusive" photograph at the Camas, Wash., pin dinner of Crown Zellerbach Corp., shows LOUIS BLOCH (left), Chairman of the Board, smiling approvingly at ALBERT BANKUS, Vice President, who has just pilfered somebody else's prepared speech and is calmly reading it off as if it were his own creation. WILLIAM D. WELSH (right) is the unfortunate victim of this deft maneuver and it appears that he is looking for the cops—or, at least, for sympathy.

Dorothy M. Powell, Eugene Rankin, Vivian Rodgers, Henry Rondeau, Harold L. Roley, Jack Savage, Roy Scott, Clarence G. Shaw, Florence Sodewasser, Thelma Tietz, Ross L. Trieman, James M. Turlington, Ann Van Norman, Dorothy Wilbert and Thelma Winters.

Ten years—Alexander Aikens, Vance C. Altree, Estel R. Aslin, Vincent Ast. John A. Birkemo, Wallace Boren, James B. Brown, James M. Brown, Alvin E. Cadd, Lewis B. Canfield, Hubert W. Cline, Charles R. Cox, Gust Cremidas, James Crosswell, Joseph M. Curran, Lloyd C. Cushman, Clifford R. Dickinson, Alvin Doyle, Donald Fifield, Eugene Finlay, Jacob Fix, Richard J. Franklin, George H. Gallaway, John F. Grace, Frank W. Gross, Elsie Heater, John Holmberg, Troy A. Howell, Walter C. Jacoby, Alfred K. Jones, Jessie Kersey, Kenneth J. Linehan, Marion Mansfield, Gustave Meyer, John C. Mihm, Harry D. Mitchell, Conrad Marasch, Ray Myers, John J. McDougall, Richard R. Ochs, Clifford J. Odums, Jultus Oldbrick, Clarence Pepper, Geneva Persons, Elliott A. Price, Fred Resner, Sam Runyan, Orval R. Sawyer, Clinton E. Shurm, Thomas J. Stenehjem, John G. Taylor, Edward R. Triplett, Frank Troxel, Jess E. Whitely, Roy Wilkinson, William J. Winters, Sprague N. Yeager.

Five years—Richard L. Baldwin, Herbert L. Bassett, Kenneth E. Bea, John A. Betts, Mary Jane Burns, Terry Cardon, Claude F. Chevron, Katherine Chinakos, Edmund W. Crisman, Joseph Dibelka, Philip Duncan, Lawrence Dungan, Joel L. Edwards, Raymond W. Haines, Walter Holzer, Helen Hoxsie, Margaret Knapp, Etta M. Lawrie, Wanona Lea Lennox, Clarence E. Pond, Shurtleff M. Purdy,

Leon E. Semke, Lucille Shields, Frank Siebels, Jr., Frank D. Sill, Claude Stone, Frank Suslik and Herbert Wymore.

Service Men

The following men in military services of Uncle Sam were awarded service pins. With the exception of Ray E. Wadsworth—who returned recently from Italy—the pins were given to relatives or friends of the men.

Twenty-five years—Clarence Osborne, navy.

Twenty years—Forrest E. Williams, navy.

Fifteen years—Jim M. Burch, merchant marine, and Robert D. O'Hara, marines.

Ten years—John R. Asher, merchant marine; William W. Hart, navy; Vern W. Kane, army; Steward H. Lawrie, navy; Lawrence E. Ogle, army; Clifford E. Parr, army; Donald E. Parsons, navy; Vincent J. Ross, army air corps; Cecil Templar, navy; and Ray E. Wadsworth, army.

Five years—Carleton M. Beck, navy; Russell P. Burns, army; Alfred L. Chasse, coast guard; Clarence M. Cline, navy; Edgar Duman, army; John R. English, navy; Ralph L. Ferguson, army; Floyd H. Hammond, navy; Elwin Jaeschke, navy; Ivan G. Johnson, navy; John Le-Tourneux, coast guard; Louis J. Meyer, army; Paul L. Middlebrook, army air corps, and Joe Nash, navy (deceased).

WEST LINN SERVICE PINS

Thirty-five years service—Joe Benski, Stanley C. Cissman, Joseph Dremer, Frank Fitzko, Albert Fromong, Alex Paterson, James Simpson.

Thirty years—Ralph Gribble, Walter Wood, Bert Zerkel.

Twenty-five years—George Beam, Frank J. Campbell, Jack Charriere, John Critic, John Delor, Robert H. Donovan, John O. Dougherty, Charles M. Gleason, Algie Gottberg, William S. Grant, Ed J. Haek, C. W. Heft, Charles Laurs, Vincent Owczarski, Stanley Reddaway, C. A. Sheer, Cleveland Sturdivant, James Swan, C. E. Teeple, Dan Williams, Claud Woods, Frank Zaniker, M. E. Zaniker.

Twenty years—John R. Adrian, Henry

WEST LINN MILL MAKES PAPER FOR "TIME"

● Samples of a new paper product of the West Linn, Ore., division of Crown Zellerbach Corp., now being used by a national magazine, served as table cloths at the West Linn pin dinner.

The mill is producing magazine paper in quantity for the new Pacific Coast and South Pacific edition of the magazine Time.

This is the first national magazine of general circulation to split up its production and start producing its western circulation on the west coast with western paper.

A. Courand, Forest D'Hondt, Ray A. Ellison, Don W. Ellison, Clarence Eng-house, Gus Fahl, Joe Gerkman, Gordon Hammerle, E. J. Haas, Milo Ingram, Henry Kerbs, Adolph Kunz, Arnold Lettenmaier, Albert Lilly, Frank Mahkovic, Lawrence Mills, John Niebauer, C. O. Schultz, Carl J. Shaffer, John Silver, Ralph C. Shivers, William P. Spencer, Anton Stalick, H. A. Smith, Alfred Wickwire.

Fifteen years—Henry Allen, Millard H. Baker, Theodore Bauer, Cap Broyles, Wilfred Coop, Alfred Curl, Lacy Day, Henry Dambach, Gerrit DeMan, O. H. Eisele, Emery F. Fisher, Ernest H. Gersch, Robert L. Goodson, Frank B. Hale, Guy Hobbs, Richard Hoover, Russell Jennings, Nels Kylo, Wm. Little, John Loretz, R. McNulty, George Rowlett, A. M. Shephard, Myron Toban, Donald Zimmer.

Ten years—LeRoy Allen, William Anderson, Edmond Apps, W. J. Aschenbrenner, Chas. Bancke, C. A. Brunner, Grant Allen Day, R. Burton Elledge, Thos. Giles, Donald Gray, Ed Grindel-land, Gilbert H. Hanson, George La-Husen, James Lester Huiras, Reed In-galls, Richard Kirchem, Irvin J. Lavier, Ernest Lester Leek, Klema W. Mathisen, John Montgomery, Florentine Mighells, Lloyd T. Odell, Charles W. Riley, Gilbert L. Hanson, Alex Scherrubel, Lindroff G. Skaar, George W. Smith, A. N. Steichen, Wallace R. Turner, Melvin Ueland, Gus Wetzel, Milton White, Marion C. Wick-strom, William L. Wilson, Melvin Wood-ward, Theodore Woods, Karl J. Wun-derlin.

Five years—Absolem Goins, Fred J. Kamrath, Marguerite E. Krummel, Don-ald V. Tiddke

Puget Sound Co.'s Timber Holdings On Vancouver Island Are Sold

● Puget Sound Pulp & Timber Co. has sold its Canadian timber subsidiaries to Canadian interests, President F. G. Stev-not has announced, for the equivalent of \$5,000,000 in American funds, plus in-terest on deferred payments. An initial payment of \$1,450,000 was received, \$550,000 is due January 3, 1945, and the balance is payable serially over a period of years.

Under terms of sale, the company has a 35-year option covering all exportable timber of pulp species produced on crown grant lands included in the properties.

The subsidiaries, Canadian Forest Products Ltd., and Beaver Cove Timber Co., with holdings in the Nimpkish Val-ley, Vancouver Island, were sold to Eburne Sawmills, Ltd., and Pacific Ve-neer Co., Ltd.

Canadian Forest Products and the Beaver Cove Timber Co. have operated in British Columbia for the past two and a half years as the Canadian sub-sidiaries of the Puget Sound Pulp & Timber Co. of Bellingham, Wash., which acquired the Nimpkish timber from Wood-English, Ltd., and various other companies in 1942. It had been the plan of the late Ossian Anderson, president of Puget Sound Pulp & Timber Co.,

to export a proportion of the logs from the Nimpkish Valley to pulp mills in the state of Washington, but he died before this could be brought about. The Canadian log export embargo, which went into effect Sept. 1, 1942—just three weeks before he died in a Vancouver hotel—and other wartime restrictions, have since made it impossible to ship the Nimpkish timber in log form to the United States.

The Puget Sound Pulp & Timber Co., however, retains its representation on the board of directors of the new company and will be entitled under an agreement to receive all crown grant logs which will be exportable from the logging op-erations. This, however, is not in large volume compared with the main body of timber rendered accessible by the log-ging development now under way.

Dominant figures in the Eburne-Saw-mills-Pacific Veneer group, which is the new owner of the timber, are Otto Pick and Leopold Bentley, president and vice president respectively, of the two orga-nizations. Both are Czechs who came to this country shortly before the war. Mr. Pick was formerly in the textile manu-facturing business; Mr. Bentley was in-terested in sugar refining.

The deal resulted in making the Pick-Bentley group the largest holders of standing timber in British Columbia.

Dexter Attends Meeting of U. S. Purchasing Agents

● Oakley W. Dexter, director of pur-chases, Crown Zellerbach Corp., Seattle, went east in late May to attend the national meeting of purchasing agents in New York City. He was a former ex-ecutive vice president of the national or-ganization. He was also going to Wash-ington, where he served for over two years in important war agency positions prior to his return to the Crown Zeller-bach Corporation last fall.

McMaster In War Posts

● A. E. McMaster, former vice-president and general manager, Powell River Co., has been appointed associate coordinator of controls in the Canadian Department of Munitions and Supply in Ottawa and liaison officer with the Department of Labor. He has also succeeded J. G. Fogo on the Production Board and the War-time Industries and Control Board.

Chas. Humble At Flintkote

● Charles F. Humble, who joined the production staff of Flintkote Co., Pioneer Division, 5500 S. Alameda St. Los An-geles, about three months ago, has swung into full stride in the performance of his duties as assistant to Grover Willifred, plant superintendent. Mr. Humble has had much experience in designing and managing felt and roofing manufactur-ing plants in various parts of the country.

His most recent connection was with E. J. Berkheimer & Co., felt and roofing manufacturing company in Tacoma, Wash., until the plant was destroyed by fire October 28. He joined Flintkote upon the decision not to rebuild the Berkheimer plant.

Coast Paper Box Manufacturers Meet

● Approximately 100 members and their wives of the Pacific Coast Pa-per Box Manufacturers' Association, were expected to attend the annual two-day meeting, scheduled for the Santa Barbara Biltmore, Santa Bar-bara, Calif., June 20 and 21, accord-ing to the executive secretary, How-ard Worth, Los Angeles. Suppliers to the trade were also expected to attend.

Two of the principal speakers were to be William Fitzhugh, New York, president, Folding Paper Box Association of America; and Harold Fuller, Boston, former president, National Paper Box Manufacturers Association.

Business meetings were scheduled during forenoon and afternoon, June 20, with a breakfast meeting and Round Table discussion on June 21. The annual banquet and dance was to be on June 20.

Presiding officer will be John V. Manners, president, Paper Box Cor-poration, Oakland, Calif., assisted by Frank M. O'Leary, vice president, Eureka Paper Box Co., Los Angeles, and R. F. Scully, treasurer, Puget Sound Paper Box Co., Seattle, Wash.

The executive committee, folding box division, includes: Wilson Field, Fleishhacker Paper Box Co., San Francisco; R. E. Mullins, Independent Paper Box Co., Los Angeles, and Harold Ridgeway, Ridgeway Litho-graph Co., Seattle. Serving on the set-up box division committee are Harry Simmons, Northwestern Pa-per Box Co., Seattle; Charles Woess-ner, Boxcraft Paper Box Co., Oak-land, and Alex Karp, Keystone Pa-per Box Co., Los Angeles.

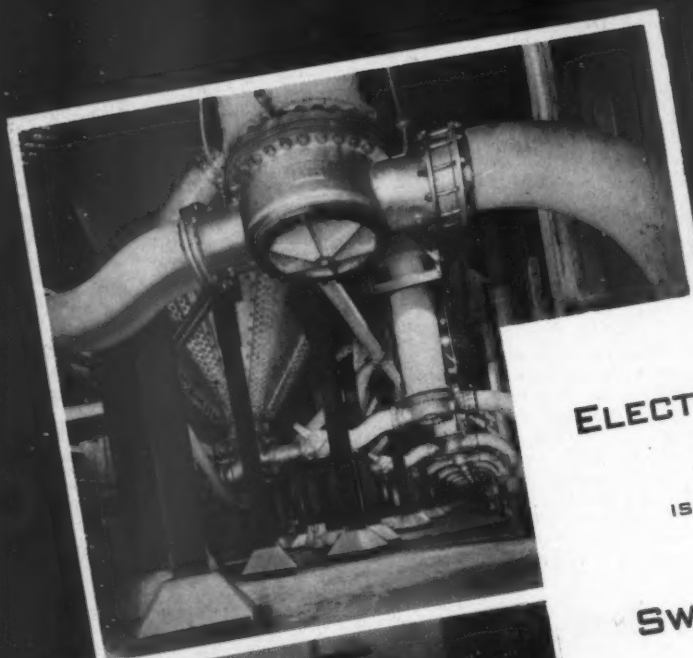
Carl Elliott Is Nominated

Carl Elliott, foreman in the ground-wood department, Hawley Pulp & Paper Co., Oregon City, Ore., was one of the successful democratic nominees in the Oregon May primary election. He was nominated for state representative from Clackamas County. Mr. Elliott has been with his company for 18 years; 14 as a foreman.

Cpl. Don Guild On Furlough

● Cpl. Don H. Guild, U. S. Army Air Transport Command in Alaska, visited his parents, Mr. and Mrs. George G. Guild, in Seattle, on furlough in May and was in California. He is on leave from Huntington Rubber Mills, of which his father is vice president and coast representative.

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EASTERN UNITED STATES AND
EASTERN PROVINCES

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THE ENTIRE PULP INDUSTRY....

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COMPANY**

(DIVISION OF WHITING CORP.)
HARVEY, ILLINOIS

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PORTLAND, OREGON

AS ITS
SALES REPRESENTATIVE
IN THE STATES OF THE PACIFIC COAST



and

ESCO

PORTLAND, OREGON

Canadian Newsprint Production in 1944 Is Expected to Exceed 3,000,000 Tons

● Present indications are that Canadian newsprint production for 1944 will exceed three million tons, equalling, if not exceeding, the average annual output during the five years immediately preceding the war and well above the total for the last prewar year, 1939, of 2.8 millions.

Such estimates are based on assumption of continued production of 32-pound paper. If operations are switched to production of 30-pound newsprint, as desired by some U. S. publishers, this may involve interruption in activities and possibly necessitate revision of present estimates.

In view of the labor shortage, and the commitments for heavy shipments of other pulp products, not only to the United States, but overseas, a 3-million-ton output for the current year would appear to be a highly satisfactory achievement.

One reason for current favorable outlook is the success that was obtained in efforts to get workers into the wood camps this past winter, to meet the threatened pulpwood shortage. Number of men in the camps this past season was some 30% in excess of a year ago.

Another factor has been the successful use of filler, and reduction of sulphite content, to "stretch" available pulp and make it go farther. Sulphite pulp content in newsprint this year has been reduced to 13.50% from 15.71% average in 1943. Canadian mills have been averaging 0.9495 cunits (a cunit is 100 cubic feet of solid pulpwood) per ton of finished newsprint as against 0.9855 previously. Amount of wood used per ton of newsprint has been reduced by 4%.

Canadian mills appear certain to fulfill their promise to supply 200,000 tons of newsprint monthly to the United States for the first half of this year—and probably for the balance of the year also, although no commitments were made beyond the first six month period.

For the first three months of this year Canada supplied 583,188 tons of newsprint to the United States, or 97% of the amount planned. For the second quarter it is expected shipments will be at least 616,812 tons, making up the small shortage of the earlier months of the year.

More Cutters In East Canada

While there were about 10,000 more employes in wood camps east of the Rockies early this year than in corresponding months of the 1943 cutting season, newsprint executives state that the increase of some 30% in men employed on such work this past winter is not to be taken as an index indicating increase in total wood cut.

Production per man, it is stated, has been lower this past year. One cause, it is said, is increased laxness of some employes under present conditions of help shortage. In addition, the fall of snow in the East, particularly in some sections has been less than desired. There has been enough snow to permit sledding of wood to the rivers, but the early thaws in the east have been a disappointment. Pulp and paper men were hoping for ample late snows to facilitate movement of late-cut wood, and to swell the rivers down which the logs must move. Considerable wood will have to be left along

the rivers until next year, from present indications.

Although overseas shipments of pulpwood products from Canada this year will be up sharply over 1943, as result of request of government authorities, shipments to the United States market will be reasonably well maintained and will be well ahead of average shipments in immediate prewar years.

Present planning is for a 5% increase over the five-year 1935-1939 average in newsprint shipments to the U. S.

Newsprint

The total amount of newsprint originally estimated to be available to United States publishers and other consumers during the second quarter was 834,000 tons. This included scheduled production of 180,000 tons in the United States and 600,000 tons in Canada for shipment to the United States, 39,000 tons in Newfoundland for shipment to the United States, plus a carryover of 15,000 tons of newsprint made in Canada for United States consumers in the first quarter. However, the next announcement of a two-month experimental period, covering the months of May and June, on the production of 30-pound newsprint for United States publishers may result in a smaller available tonnage if United States publishers order appreciable amounts of the lighter weight paper.

An agreement between representatives of the War Production Board, and the Canadian Newsprint Administrator for production of 30-pound newsprint by Canadian mills was announced April 21. This action was taken after consultation with the Newspaper Publishers Industry Advisory Committee in the United States, and the Canadian Newsprint Industry Advisory Committee. Manufacturer of both 30-pound and the standard 32-pound newsprint will be carried on during May and June, in order to study problems involved in the production and distribution of both weights of newsprint. Following the experimental period, during which United States publishers are privileged to order either 30-pound or 32-pound newsprint, the data on usage will be studied by WPB.

The former agreement on the part of Canada to furnish 200,000 tons a month of 32-pound has been suspended during the experimental period, and it has been arranged that Canadian production will be planned monthly on the basis of actual orders placed by American publishers and certified in accordance with EPB limitation orders. Every effort will be made to see that each publisher still gets his full quota tonnage if any reduction in Canadian production results. Arrangements were also made between the Office of Price Administration (U. S.) and the Wartime Prices and Trade Board (Canada) whereby Canadian newsprint producers (as well as those in the U. S.) will receive an additional \$4 per ton for 30-pound newsprint for a 90-day period commencing May 1.

The proposal to substitute a 30-pound paper for the standard 32-pound weight has not been favored by Canadian authorities, who are of the opinion that the volume of newsprint which can be exported from Canada to the United

States is likely to be reduced if such a shift is made. A preliminary study of the problems of production and distribution involved was made between February 25 and April 21. The study was made with a view to ascertaining the production that can be expected from each available newsprint machine under current conditions of labor, wood supply, electric power, and machine capacity. This study has brought out the following data as indicative of results which may reasonably be expected if the two weights are produced.

Under actual operating experience in the manufacture of both weights of paper some technical improvements in production may be possible. However, concentration of the newsprint industry by Government order, manpower shortages, diversion of electric power for war purposes, the situation as to pulpwood supplies, and the economical use of newsprint machines are limiting factors on Canadian production.

Orders of United States newspaper publishers for May total 206,339 tons, comprising 112,436 tons of 32-pound paper and 93,903 tons of 30-pound paper. The extra 6,339 tons of these orders over the previous commitment of 200,000 tons, now suspended, will be absorbed from surplus remaining in Canada from the first quarter.

United States newspaper publishers who have ordered over 100 tons of 30-pound newsprint for May have been asked by WPB to reduce their Canadian orders for this weight by 10 per cent, in order to balance the Canadian production in the first month of the sixty-day test period.

The schedule of tonnages representing orders of 32 and 30-pound paper, indicates certain levels on the basis of the different orders. On the basis of this schedule, it would be necessary for United States publishers ordering 30-pound paper to take an 8 1/4 per cent reduction during the month of May. However, as it is impractical to reduce orders of 30-pound paper when only a carload or two is ordered, if less than carload shipments are to be avoided, all newspapers ordering more than 100 tons of 30-pound newsprint have been asked to cut their orders for May delivery by 10 per cent. Any resulting shortages can be made up out of the publishers' own inventories.

Canadian Newsprint Up; U. S. Output Is Down

● Newsprint production in Canada during April totaled 236,353 tons and shipments, 256,543 tons. Production in the United States was 54,636 tons and shipments, 56,103 tons. The output in Newfoundland was 19,725 tons and shipments, 24,077 tons. Total North American production was 310,714 tons and shipments, 336,723 tons.

The Canadian mills produced 39,329 tons more in the first four months of 1944 than in the first four months of 1943, which was an increase of 4.2%. The output in the United States was 43,465 tons or 15.9% less than in the first four months of 1943; in Newfoundland production was 28,874 tons or 44.3% more, making a net increase of 20,738 tons, or 1.6%.

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Brisbois Presents Service Pins To 20 Employees at Sumner, Wash., Division

● Fibreboard Products Inc., Sumner Division No. 5, held their Semi-Annual Social Meeting and dinner, Thursday, May 25, at My Wife's Cafe in Sumner, Wash. These Social Meetings, sponsored by the Pivot Men's Club, have become a tradition with the Fibreboard Companies throughout the Pacific Coast and Mr. N. M. Brisbois, vice president in charge of operations, has made it a practice to attend these meetings. As a guest speaker, Mr. Brisbois discussed briefly present and postwar planning proposed by Fibreboard, and expansions which will better assure jobs for all of returning service men and steady employment for all employees.

A highlight of the evening was the presentation of service pin awards to employees by the vice president, who had a personal and friendly word for each one. His personal interest in each recipient was manifest by his humorous remarks concerning their hobbies and domestic affairs.

These pins were presented:

Five Year—Leonard Hickok, Helen Nix.

Ten Year—Harold Wright, Joseph Miller, Harvey Thurston, Allan Ray, Harry Tanner, Robert Truner.

Fifteen Year—Otto Schoeler, Joseph Bosik, Richard Boyle, Leon Wade, Jesse Harvey, Jess Stahlhut, Floyd Woods, Francis Hilliard, Frank Sandford, Robert Russell, Austin Stone and William Turner.



N. M. BRISBOIS, Vice President in Charge of Op'ns, who presented pins at Fibreboard dinner at Sumner, Wash.

M. E. Sanford, resident manager, presented suggestion awards, in the form of cash awards, to Chester Snow, Floyd Woods, Coridan Caster, Steve Kendall, Arthur Charnock and Clyde Ferguson. These awards were given for suggestions that had been turned in and adopted.

The meeting ended with motion pictures.

Other guests included Al Hayes, Everett Wasdworth, Ben Bruce, Norman Faulkner, Stewart Schatz, W. S. Ayers, Wade Young, James Biggs, Fred Strankman, Bob Hurd and Nels Mork.

Port Angeles Pivot Club

● The Port Angeles, Wash., Division of the Fibreboard Products Inc. held their May Pivot Club Dinner at the Port Angeles Country Club on the evening of May 19 and because of the long evenings it was possible to also arrange a nine-hole golf contest among the Pivot Club men and some invited guests.

The invited guests included Albert Wilson, editor of the Pacific PULP & PAPER INDUSTRY, who spoke briefly on his recent tour of 16 eastern and midwestern pulp and paper mills, and Sgt. Lloyd Holcomb, U. S. Army, brother of Robert Holcomb, assistant chief chemist at the Port Angeles Division. Sgt. Holcomb told of his battle experiences and other behind-the-news information on the war in North Africa and Italy. He also passed around samples of paper currency manufactured in Philadelphia and used by the military forces in the Mediterranean area.

Other guests were Myron Scott, office manager, Port Angeles Division of Rayonier Incorporated; Stanley Swanson, executive of a local plywood company, who entertained on the piano, and Hiram Walker, and Henry Benson, Seattle auditors, were also present.

Phil Nash, office manager, was in charge of the affair, and presided at the chicken dinner and pivot session following the dinner.

Other Pivot Club members present were Verne Basom, resident manager; Nelson Hartnagel, assistant manager and chief chemist; Tom Beaune, sulphite superintendent; Jess Bonnar, chief engineer; Charles Meagher, paper mill superintendent; Jack Morris, accountant; Art Benson, master mechanic; George Adams, traffic manager; Glen Gordon, finishing room fore-



EXECUTIVES AND GUESTS OF FIBREBOARD PRODUCTS INC., in the clubhouse, after dinner and evening of golf May 20, at Port Angeles, Wash.

On left, Stanley Swanson, a guest (back to camera) and R. A. Lawrence, Personnel Manager.

The four in front row center (left to right): Myron Scott, Office Manager, Port Angeles division of Rayonier Incorporated; H. O. Holcomb, Asst. Chief Chemist at Fibreboard; J. W. Bonnar, Chief Engineer, and Charles Meagher, Board Mill Superintendent.

Back row of center group (left to right): Hiram Walker; Henry Benson, and Sgt. Lloyd Holcomb, guests; Robt. Standard, Acting Purchasing Agent; E. J. Cavanaugh, Resident Engineer; Phil Nash, Office Manager; Nelson Hartnagel, Asst. Resident Mgr. and Chief Chemist; Glen Gordon, Finishing Room Foreman.

Group on right: G. L. Adams, Traffic Mgr.; Bill Agan, Retired ex-Paymaster, and C. Verne Basom, Resident Manager.



IN FOOTHILLS OF OLYMPICS, duffers and experts roamed the fairways at Fibreboard Products Inc., Port Angeles mill's annual outing.

After a full day on the job at the mill, they were afforded the opportunity of a brief nine holes of golf because of the long evening of daylight at that northern mill. Busy at war work, it was the only golf most had played in many months.

Top row (left to right): Resident Manager Verne Basom; Asst. Mgr. Nelson Hartnagle; G. L. Adams, who took movies; Eddie Cavanaugh; Myron Scott; Glen Gordon, and Henry Benson.

Lower row (left to right): Phil Nash; Sgt. Lloyd Holcomb; J. W. Bonnar; H. O. Holcomb; H. V. Morris; Stanley Swanson; R. A. Lawrence; Robert Standard; Art F. Benson and Nelson Hartnagle.

man, Robert Standard, acting purchasing agent; B. Adams, yard foreman; E. J. Cavanaugh, resident engineer; R. A. Lawrence, personnel director, and R. O. Holcomb, assistant chief chemist.

A recent shortage of skilled personnel on the various operating jobs made it necessary for G. M. Marvin, regular purchasing agent, to temporarily take over a position of machine tender on No. 2 machine while Mr. R. G. Standard acts in his place in the purchasing office.

Pacific Paperboard Gets Another Machine

● Pacific Paperboard Co., Longview, Wash., having recently installed its No. 3 machine, has already purchased and holds on its premises another second hand cylinder board machine for installation after the war. With completion of its new power plant, studies are now being made in the possible use of coal as against the certain decrease in hogged fuel supplies.

When peace comes, E. E. Flood, president, expects resumption of export trade with the Orient, the renewal of production in discontinued lines, and, with removal of restrictions, enlarged output of higher quality board.

Brian Shera Finds Mexican Industry Is Modern

● Brian Shera, representative of Pennsylvania Salt Manuf. Co. of Washington, Tacoma, Wash., who toured Mexico this spring, reports that he was very impressed with modern processes and equipment in the pulp and paper mills of that country.

He said he found that Pacific Northwest pulp stands high with Mexican operators because of quality and also because of the manner in which accounts have been handled, building up good will between the neighbor nations.

Mr. Shera visited the modern sulphate pulp mill and paper mill of Fabricas de Papel Loreto y Pena Pobre, built in 1941, and met the owners, Alfredo Lenz, president, and other members of the Lenz family. This company, he said, has launched a modern reforestation program which is the first of its kind undertaken in Mexico.

He also visited the Fabrica de Papel Coyoacan, which uses a paper machine imported from the old Cascade mill near Tacoma, Wash., and met the president, Tomas Mier.

He met Meredith Parker of Corporacion Celulosa Mexicana, S.A., in Mexico City, who represents several northwest mills.

This was Mr. Shera's first visit to his native land in 15 years. He visited his own family and friends.

E. A. Shelton Married

E. A. Shelton, assistant manager, resale department, Headquarters Division, Zellerbach Paper Co., San Francisco, was back at his desk June 3 from six weeks in the East on a business and honeymoon trip. Prior to his departure he was married to Mrs. Marjorie Van der Zwiep of San Francisco.

City's Waste Paper Goes to Waste

● Despite the Canadian government's plea for the salvage of all waste paper to make up the 20,000 tons required by the nation every month, none of the paper refuse from Vancouver city hall or turned over to the Vancouver incinerator is saved, according to a recent survey made at the suggestion of Sidney Roofing & Paper Co. of Victoria, B. C.

The Sidney Roofing company used more than 6,000 tons of waste paper last year and would have used more had it been available.

Excelsior Paper Co. is cooperating in the collection of waste paper in the Greater Vancouver area for the Sidney Roofing & Paper Co.

New Loading Device for Small Logs Developed in "Ladysmith Experiment"

● Continuing in the tradition of experimentation with which the whole enterprise was launched, Comox Logging & Railway Co. has developed a new loading device for handling the small logs to be shipped from the Ladysmith, B. C., cutover area for pulping at the Powell River Co. mill.

It is actually a re-logging project, taking out smaller logs which ordinarily left on the land in western operations as uneconomical to take with the heavy equipment usually used in the West.

It was found that the operation required a faster loading rig than used on big logs so that trucks could be kept moving between the logged area and the dump and booming ground at Ladysmith harbor. The problem was turned over to Joe Cliff, Ladysmith foreman for Comox Logging Co., and he came up with a new idea in the form of a conveyor loader which so far has been entirely satisfactory.

Four conveyor arms 20 feet long are set at 8-foot intervals and are mounted on a 40-foot sled. The small piles of logs (one can be seen in background of an accompanying picture) are roaded with a tractor and arch landing in front of the conveyor. The logs are then rolled down to the conveyor which elevates and drops them on the trucks. The conveyor is powered with a Ford V8 engine.

It was found desirable to build a bed on the trucks because of the great variety of lengths of logs to be handled. Extra bunks are supported by two timber sticks, which are underslung from the two bunks on the truck and trailer. In order to build up a high load, side stakes have been attached to the ends of the bunks.

After the loading operation is completed, three wires are placed around the whole truck-load. This bundle, containing about 70 pieces (the pulpwood averages six inches in diameter), is dumped intact and is treated as a unit in making up the conventional flat boom in the Ladysmith booming grounds.

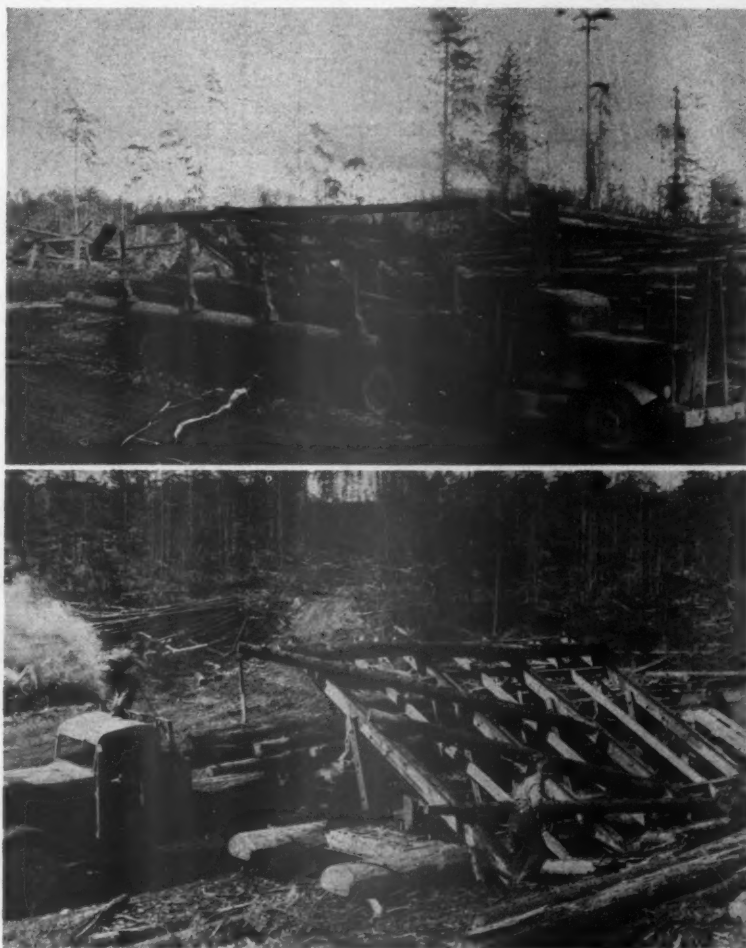
Transportation of these small logs did not attain the expected heavy volume last winter owing to the open season for logging. Usually, the fall of snow is so heavy and the mercury is so low that active logging in the Ladysmith area has to be halted for a considerable pe-

riod during the winter. Last winter, however, there was comparatively little snow and in view of the shortage of standard logs, operations were continued through December, January and February, with a brief shutdown at Christmas-time. This meant that all the company's trucking equipment was in use for regular operations and the transportation of the small logs for the salvage project for Powell River Co. was held in abeyance. Now, however, the small logs are moving quite rapidly and during the present sum-

mer Powell River Co. will have a real opportunity to test the small material for pulping purposes.

In anticipation of this, Powell River Co. has made extensive alterations to its sawmill.

The experiment is being watched closely by men in the industry because, if successful, it will not only open up a new source of raw material for the pulp and paper mills, many of which have been in short supply for months, but it will provide new revenue for logging companies which will be able to sell



(Above) Specially designed truck being loaded with the fine-looking small logs being salvaged at Ladysmith, B. C., for Powell River Company paper mill.

(Below) View from the other side of the truck showing the speedy conveyor loader in operation.

There is an implicit challenge in what has been accomplished at Ladysmith already. It is a challenge to loggers and machinery manufacturers to develop the kind of light, fast-working equipment that is going to be needed in the future in far western logging operations for the pulp and paper industry.

much of the fallen small timber that in the past has been burned as slash.

President Harold Foley, Control Superintendent Harry Andrews and other executives of Powell River Co. as well as Vice-President Robert J. Filberg and Logging Superintendent James Sheasgreen of Comox Logging Co., are optimistic, and so are Chief Forester C. D. Orchard and Angus MacBean, representing the provincial British Columbia forest service. (The government shares with the two companies in underwriting the project.)

There are several limiting factors, however, and these are now

generally recognized. The favorable prospects facing the present Ladysmith experiment are due primarily to the favorable topography of the Ladysmith area and the economy with which the small stuff can be salvaged and trucked to tide-water. With hemlock at its present high price, salvage of hemlock logs is naturally more easily justified than it would be with hemlock at much lower levels. Some loggers doubt whether the experiment would be worth while in case of forest lands where the occurrence of hemlock or other pulpwood species is much less than in the Ladysmith area.

However, there are extensive

tracts of timber in British Columbia, notably on Vancouver Island, where there is an abundance of hemlock and where the salvage of small logs would probably be profitable. One such tract is in the southwest section of Vancouver Island where Bloedel, Stewart & Welch, Ltd., already contemplate the establishment of a sulphite pulp mill after the war.

For complete description and illustrations of the earlier developments in the Ladysmith experiment see *Pacific PULP & PAPER INDUSTRY*, July, 1943, pages 6-12.



A 25-YEAR CLUB OF POWELL RIVER CO. EMPLOYEES HAS BEEN FORMED. The organization was inaugurated on April 18 at Powell River, B. C., when Harold S. Foley, President, presented each of the charter members shown in the above photograph with an engraved watch.

S. D. Brooks, Chairman of the Board, shown in the center photograph, heads the old-timers with an association dating back to formation of the company in 1910. Other club members:

First row (left to right—the first six are employees since 1910): James H. Lawson (a director and attorney), George Paterson (oldest member), Chas. Powell, Harry Middleton, John J. Richardson, Len A. Keith, Archie W. DeLand, John McLeod, F. C. Powell, Edward Peacock, N. R. Gribble.

Second row: W. E. Wilshire, William Hutchinson, Chas. Rushant, Gus Schuler, Peter Michelus, Arthur C. Dunn, A. H. McLean, A. F. Pritchard.

Third row: Carl J. Gaudet, Harry C. Hatch, G. B. Trevesan, Wm. P. Alexander, G. Biasutti, J. G. Hammerton, John McIntyre, Walter G. Batterham.

Fourth row: A. Artico, Arthur S. Richards, N. W. McKnight, Al. B. Hatch, Chas. H. Beecroft, D. A. Milne, Harry E. Donigan, William Barclay.

Fifth row: Ed Greenfield, Miss M. E. Garvin, Harry E. Cooper, F. Brassanutti, Roy W. Foote, W. F. C. Fishleigh, A. Tomado, John Biasutti, Oscar G. Smith, John Elly, Len C. Thomson.

Sixth row: Geo. Heward, Frank Maslin, E. V. Sadler, Sam O. Marshall, Tom D. Rees, Sam Dice, Jack Pickles, A. G. McQuarrie, Jack Wilson, Wm. H. Roberts, R. M. Brown.

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RIGHT NOW AND AFTER THE WAR
Every day the information this slide rule can give you will come in handy — prove valuable; for instance:

If I juggled my pipes, could I save pumping power?

If we increase tonnage, what changes are involved in our chests? In our pipes?

If I have choice of pipe sizes, which would prove more economical in the long run?

Would a pipe line handling raw sulphite handle same amount of raw sulphate with same power?

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Problem: How many gallons per minute must a pump handle to equal 100 tons 24 hrs. of 3% stock,

Solution: Move slide so 3% shows under arrow in center of rule (Step 6). Read over 100 tons at bottom of rule, 560 gallons per minute. (ans.)

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Solution: From table "Velocity recommended for paper stock", we find 3% should be handled at 4 to 7 feet per second. In window No. 1 we set 560 G.P.M. in line with 7 feet velocity per second and read 6" pipe as economical size for this service. (ans.)

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New Executives in Los Angeles Introduced As Bankus Outlines C-Z Postwar Plans

● "Every lost freedom must be restored after peace comes. Millions of men and women will come back from the war and must be absorbed into civilian employment. Industry has before it no more important job than that of providing jobs so there will be no nose-dive to depression."

Albert Bankus, vice president, Crown Zellerbach Corp., San Francisco, made this keynote statement to employees of the Crown Willamette Paper Co., Los Angeles division of Crown Zellerbach Corp., at the annual service-pin dinner, April 14 at the Mayfair Hotel.

Principal speaker at the affair which was attended by some 80 employees and executives, Mr. Bankus not only touched on some of the company's postwar aims, but also introduced new executives of the Los Angeles division.

Lester E. Remmers, for the past 16 years sales manager, coarse wrapping division, Los Angeles, has been made local manager, responsible for both production and sales. He succeeds William McHaffie, manager of the Los Angeles division for more than 50 years who, through illness has been compelled to retire from active service.

Andrew W. Olsen, formerly manager of the Lebanon, Ore., mill, and more recently an executive at Camas, Wash., is now production manager. J. F. "Jake" Gigler, formerly superintendent, napkin division, at Camas, has been named general superintendent at Los Angeles. Newbey A. Green is appointed sales manager, coarse wrapping division.

J. Y. Baruh, executive vice president, Los Angeles, had been scheduled to present the service pins, but was prevented from doing so by illness.

Accompanying Mr. Bankus from San Francisco were Otto Hartwig, director of safety and first aid for the Crown Zellerbach Corp., and William D. Welsh, public relations, both of whom spoke briefly.

Introduced by Mr. Remmers, who acted as toastmaster, Vice President Bankus prefaced his remarks with a tribute to Mr. McHaffie for his long years of service. "Only when it became sure that he could not reassume his duties did we decide on a rearrangement of management responsibilities for the Los Angeles division," Mr. Bankus declared.

"Our job is to plan for security



HEAD TABLE (naturally, it wasn't in this shape) at the recent CROWN WILLAMETTE PAPER CO., dinner for Los Angeles Division executives in Los Angeles. Left to right: William D. Welsh and Otto Hartwig, Crown Zellerbach Corp. officials; Otto Gigler, Los Angeles, General Superintendent; A. W. Olson, Production Manager; Albert Bankus, Vice President of Crown Zellerbach Corp.; Lester Remmers, Manager in Los Angeles; Newbey A. Green, Harry Fields, Robert Tiley and Bill Daley, sales executives; Jack Thompson, Los Angeles Personnel Manager, and E. E. Gregory, Tissue Division Supervisor.

and normal growth, and to protect investors and employees," he said. "We must provide maximum employment for returning service men. We have promised that. It calls for give and take, and someone is inevitably going to get hurt. This must be minimized as much as possible."

He declared another responsibility his company and all industry must assume is to those men partially dis-

Zellerbach in the postwar era, Mr. Bankus said there must be an upgrading of products to assure the company always being competitive.

Mr. Bankus referred to the physical condition of the company asserting that, while it was \$14,000,000 in debt during the depression in 1931, today it is clear of debt, with timber reserves and financial reserves totalling \$50,000,000.

Frank Orth, pressman, received the highest honors in the service pin awards for 45 years employment. Pins for 25 years' service were given to Nick Tarin and Dick Jackman; for 20 years, to Henry Cruz and Ray Saldana; for 15 years, to Mac Gallegos, Nep Godinez, Carl Kley, Lewis Enna and Santos Perez, the latter two now on military leave; for ten years, to Sal Chacon, Jake Gigler, William Bogdanov; and for five years, Charels Gargaro, Sam Enna, Melvin Strader and Francis Barto, the last three on military leave.

Ray Schadt Is Manager At Carthage, N. Y., Mill

● Raymond J. Schadt, honorably discharged after service as a captain in the U. S. Army Chemical Warfare Service, has been appointed resident manager of the National Paper Products Co., Carthage, N. Y., which averages 75 tons a day of tissue and towel products.

Peter T. Sinclair, who went to Carthage 13 years ago from the Crown Zellerbach kraft mill at Port Townsend, Wash., to become resident manager of the affiliated mill in New York, will return to the west coast to assume new duties in the Crown Zellerbach organization.

Ray Schadt was an executive assistant in the Crown Zellerbach Corp., before joining the service. He formerly was with Crown Zellerbach and Hawley Pulp & Paper Co. mills in the west.



(Top) — ALBERT BANKUS (left), Vice President of Crown Zellerbach Corp., congratulates FRANK ORTH, Pressman, 45-Year Pin Winner, at Los Angeles dinner.

(Below — left to right) — NEW EXECUTIVES OF CROWN WILLAMETTE PAPER CO., Los Angeles Division: J. F. GIGLER, General Superintendent; LESTER E. REMMERS, Manager, responsible for Production and Sales; and ANDREW W. OLSON, Production Manager.

abled by war. They must be channeled into useful work.

As to the concrete aims of Crown

SHIBLEY AWARD WINNING PAPER FOR 1944

Pulp and Paper Mill Slime and Its Control

By GLEN KING*

Research Chemist,
Washington Pulp & Paper Co., Port Angeles, Wash.
(Division of Crown Zellerbach Corp.)

Introduction

At the start of this work, in 1933, information on slime, its causes, elimination and control, was meager. Today there are a few articles and many advertising pamphlets on the subject, but we find many of them to be the work of chemical companies, who, intentionally or otherwise, show the organisms to be most susceptible to the chemical they are interested in. For this reason it was thought the actual experience in the Port Angeles mill of Washington Pulp and Paper Co., through a number of years, in reducing slime from an acute condition of heavy, prolific growth to present day controlled growth, should be of interest. At times the growth has been known to reach a depth of 1/2 to 1 inch in a period of three or four days.

This mill produces newsprint with the most troublesome growth occurring in the groundwood mills and on the paper machines. Moderate growth is encountered in the sulphite mill. Due to the nature of the mill systems and of groundwood pulp itself, growth was not achieved quickly or by any one person, but by a series of steps and trials. The cooperation of all departments in each of the steps, brought slime control closer to the goal.

Organisms

Other papers on slime control cover the field of organisms quite thoroughly. Organisms encountered here include almost every type recorded elsewhere as having been isolated, plus a few others. They consist of capsulated and non-capsulated, spore and non-spore formers, iron and sulfur utilizing bacteria, and members of the mold family, all having in common the characteristic of rapid growth.

Found to be prevalent at times were: areobacter aerogenes and other members of that family, E coli, B coli, B subtilis, B mycoides, proteus vulgaris, achromobacter, sulfurem, crenothrix, cladosporium and several unidentified filamentous mold type organisms, all of which found almost optimum conditions and pH (5.0 to 6.0) in the systems of our mill.

*Mr. King's present address, Central Technical Department, Crown Zellerbach Corp., Camas, Wash.

See Page 15 for report on the awarding of the Shibley prize to Mr. King for this paper at the Joint Annual Meeting of the Pacific Coast Superintendents and TAPPI in Portland, June 3. It was at this meeting that Mr. King presented the paper. The prize is for the best TAPPI paper on the coast during 1943-44. It is named for the late Kenneth Shibley, who installed a number of filter plants in coast mills and suggested such a prize to encourage younger employees in the mills.

All too often investigators or representatives of chemical concerns will examine slime samples from a mill, find one type of organism in majority, and point out the chemicals to use against this particular organism. It appears many have erred in drawing conclusions from what might be termed a "spot test." We have found the flora of slime growth to be constantly changing or cycling, dependent upon the time of year and the treatment used for control. Grant (1) found this to be true.

If, in a mill thoroughly contaminated with slime, treatment is made with a chemical more or less specific in nature against the prevalent organisms, one of the other types immediately increases activity and within a few weeks slime conditions are back to the same level as before treatment. Instances have been noted of the treatment changing the slime from a tight clinging, dark, comparatively heavy growth to one equally heavy, but light in color and easily sluffing off which caused more trouble than the original growth. Another time a chemical company salesman took slime samples when a fairly good bactericide was being used, but some mold growth had resulted. Their recommendation to cure our slime trouble was immediate use of a chemical specific for mold, which would have undoubtedly resulted in an increase of bacteria slime.

TABLE I.

Chemical	P.P.M. To Sterilize in 1 hour	P.P.M. To Sterilize in 24 hours	P.P.M. To Prevent Growth Increase
Ethyl Mercury Chloride	10	5	5
Merphenyl Acetate	100	50	20
Ethyl Mercury Phosphate 66	100	50	5
Ethyl Mercury Chloride 45	300	100	10
Magnesium Silicofluoride	500	75	15
Ortho-di-chlorobenzene	500	100	50
Potassium Fluoride	500	100	10
Sodium Silicofluoride	500*	100	50
Ethyl Mercury Hydroxide	500	250	10
Sodium Penta-chlorophosphate	500	250	100
Sodium Tetra-chlorophosphate	500	250	150
Sodium O-phenylphosphate	500	500	150
Merphenyl Benzate	150*	150*	(plotted)
Hydrogen Peroxide	300*	300	50
Sodium Peroxide	300*	300	(1)
Zinc Tetra-chlorophosphate	300*	300	50
Ethyl Mercury Glucate	500	500	75
2,4,5-tri-chlorophenol	500	500	100
p-sulfon-di-chloro-amino-benzoic acid	500	500	50
Benzyl Phenol	500	500	250*
Benzyl Fluoride	1000*	500	50
Sodium Perborate	1000	500	25
2-Hydroxy-6-chlorotoluene	1000	500	50
Neta-naphthol	1000	500	150
Asochloramide	1000	500	250
Copper Sulfate	1000*	1000	150

TABLE II.

Chemical	P.P.M. To Sterilize in 1 hour	P.P.M. To Sterilize in 24 hours	P.P.M. To Prevent Growth Increase
Formaldehyde	200**	200*	25
Copper Sulfate	100**	100*	50
Merphenyl Glucate	150**	150*	150*
Paraformaldehyde	200**	200**	200*
Sodium Arsenite	500**	500**	500*
Sodium Fluoride	500**	500**	100
2-Chloro-o-phenyl phenol	500**	500	500
Sulfidol	1000**	1000	150
Borax (sodium borate)	1000**	1000*	250
Cumene-Isophenol	500**	500**	500*
Boric Acid	1500**	1500**	100
Chloroacetic	1000**	1000**	1000*
Aluminum Borate	1000**	1000**	1000
Cresophene	500**	500 (solid)	500*
Synthetic Crystalite	1000**	1000**	1000*
Barium Sulfite	1000**	1000**	1000*
Zinc Hydroxide	1000**	100 (solid)	100*
Magnesium Fluoride	500**	500**	100
P. Chlorophenol	1000**	1000**	1000
Sodium Hexafluorophosphate	1500**	1000**	1000*
Barium Carbonate	500**	500**	500*

The * in columns 1 and 2 indicates the degree of growth of these concentrations, which were the highest concentrations used in the test.

In column 3 the * indicates a greater concentration than that given is required to inhibit growth.

(-) indicates less than
(*) indicates more than or growth at this concentration
(g.p.m.) (10⁻⁴) = Percent concentration by weight
(1) Only small concentrations tested. Figures arrived at by extrapolation.

TABLE III.

Ethyl Mercuric Chloride			Solubility between 10-25 p.p.m. Does not react with stock or affect color. Toxic to all organisms	Ortho-di-chlorobenzene (Technical)			
P.p.m.	1 Hr. Count	24 Hr. Count		P.p.m.	1 Hr. Count	24 Hr. Count	
0	453,000	625,000		0	222,000	2,434,000	Very slightly alkaline
5	37,000	0		50	2,500	460	
10	50	0		100	210	0	Distinct odor
25	0	0		250	60	0	
50	0	0		500	0	0	Low cost chemical
75	0	0		1000	0	0	
Methylphenyl Acetate			Very low solubility	Potassium Fluoride			No stock reaction
P.p.m.	1 Hr. Count	24 Hr. Count		P.p.m.	1 Hr. Count	24 Hr. Count	
0	25,470	362,000		0	312,000	1,000,000*	
10	1,120	180,000		10	210,000	46,300	
50	3	0		25	143,000	40	
100	0	0		50	123,000	120	
150	0	0		75	7,000	20	
200	0	0		100	7,800	2	
500	0	0		Sodium Silicofluoride			Very acid Brightens stock
(Ethyl Mercuric Phosphate - 6%)				P.p.m.	1 Hr. Count	24 Hr. Count	
0	363,000	Solids		0	102,000	2,700,000	
5	176,000	1,973		50	78,600	460	
10	14,600	160		100	27,600	7	
50	800	0		150	24,000	2	
100	0	0		200	2,500	3	
500	0	0		300	1,600	0	
(Ethyl Mercuric Chloride - 4%)				500	590	0	
0	210,000	Solids		Ethyl Mercuric Hydroxide			Solubility about 100 p.p.m.
10	1,800	110		0	96,000	1,020,000	
175	600	60		10	36,000	17,250	
100	200	0		50	2,800	30	Alkaline - 1,000 p.p.m. raised pH of stock 2.0 points
260	0	0		100	10	33	
300	0	0		250	20	0	
Magnesium Silicofluoride			Very acid. Low cost Causes some foaming	500	0	0	
0	120,000	702,000		1000	0	0	
10	112,000	104,000		Sodium Penta-chlorophenate			Slightly alkaline High stock demand Causes some foaming
25	96,000	51,000		0	198,000	1,674,000	
50	43,000	60		50	3,400	6,900	
75	30,000	0		100	380	132	
100	19,000	0		250	60	0	
500	120	0		500	0	0	
Sine Tetra-chlorophenate			Very slowly soluble, probably accounting for the comparatively low 1 hour counts Slight color loss	1000	0	0	
0	27,600	1,000,000 plus		Sodium Tetra-chlorophenate			Very alkaline Causes foaming of stock
50	17,100	760		0	210,000	1,590,000	
75	18,000	250		10	158,000	1,980,000	
100	7,000	100		50	36,000	33,600	
200	2,600	10		100	2,100	2,700	
500	1,440	0		250	20	0	
Ethyl Mercuric Oleate			Oily liquid Some color loss	500	0	0	
0	240,000	918,000		1000	0	0	
25	160,000	590,000		Sodium O-phenylphenate			Alkaline - 6.8% stock Very high stock demand
50	90,000	150,000		0	275,000	1,500,000	
75	60,000	21,600		50	196,000	141,000	
100	13,000	7,800		75	212,000	209,000	
150	12,000	580		100	192,000	151,000	
500	100	0		150	216,000	160,000	
2-A-3 Tri-chlorophenol			No effect on stock	Dissolved in boiling water and added			
0	102,600	1,980,000		100	170,000	153,000	
10	16,600	140,000		200	5,000	10	
50	11,400	16,900		300	100	0	
100	10,800	600		Methylphenyl Benzoate			Stock demand well above 10 p.p.m. Only slightly soluble
250	2,600	70		0	40,400	1,365,000	
500	0	0		5	16,000	480,000	
1000	0	0		5	8,190	200,000	
P-sulfon-di-chloro-amine-benzoic acid			Very acid probably accounting for some disinfecting ability Colors stock yellow similar to oxidation reaction	10	8,070	346,000	
0	150,000	1,296,000		Hydrogen Peroxide			Colors stock yellow Must react with stock yet inhibits growth
10	162,000	398,000		0	261,000	879,000	
50	144,800	127,000		50	22,000	900	
100	75,600	45,400		75	13,000	100	
250	330	110		100	7,800	80	
500	0	0		200	790	0	
1000	0	0		300	70	0	
Benzyl Phenol			Colonies inhibited Acid Solubility approx. 200 p.p.m.	Sodium Peroxide			Alkaline Would be difficult to use commercially
0	204,000	5,400,000		0	135,000	1,350,000	
10	138,000	500,000		50	1,000	70	
50	64,800	216,000		75	480	41	
100	13,800	200,000		100	100	6	
250	10	30		200	20	2	
500	0	0		300	20	0	
1000	0	0					

Sources and Their Elimination

● The organisms of the slime are mostly soil, sewage and water type. Before chlorination of the incoming water, many were introduced through this medium. One type, achromobacter sulfureum was traced directly to salmon that spawned in great numbers in the river from which the water is obtained. Now, all water for pulp dilution is filtered and reaches the mill with a chlorine residual of .25 to .50 parts per million.

During the early work, examination showed the log pond had an almost unbelievable profusion of growth. Food source, in

addition to sawmill refuse, was an overflow of waste cooking liquor. As the sawed wood was being washed with this same water, a great deal of the contamination was from this source. The stopping of the waste liquor and use of fresh chlorinated water for showers reduced this.

The wood itself is a source, as it has been found that a great many bacteria survive the heat of the grinders. There are a few in the pulp itself, and many on the splinters and slabs. During the first few hours of start-up, before temperature is reached, almost 100% are carried through into the system.

Control Testing

● To follow mill conditions and to test chemicals, a bacteriological laboratory was set up. Work on identification and growth led to the formula for agar on which these slime-formers reproduced the best. (A mixture 5 parts nutrient and 3½ parts Sabourauds agar). Actual bacteria counts and a grading system of the streaks were methods of tabulating growth. However, the bacteria free in the systems as shown by the plates, does not always indicate slime conditions, as a tight, heavy localized growth does not show on the plated samples until it starts to sluff off, so they must be correlated with visual examination.

For the process of slime control, two methods went hand in hand. In the laboratory, chemicals and methods were being tested, while the best of them were tried on mill scale. In the following account of the mill tests made, many of the variations and adjustments are given to show the effort made to make them successful.

Mill Control

● Chlorine is well recognized as a bactericide so it was logically the first to be tried. But, we find chlorine in any form to react very readily with our western groundwood. It combines chemically with the lignin, which is present to about 30% of the pulp. Chlorine will sterilize in water where it reacts with the bacteria as readily and at the same time as with the relatively small reactive organic matter. But in the presence of the large amounts of pulp, 30% of which has great reactivity with the chlorine, sterilizing action is not easily achieved.

Preformed Chloramine formed by chlorination of lime water (calcium hypochlorite) and diluting in ammonium sulfate solution was used for several years. This forms a semi-stable chlorine compound which, it was thought, should give off its chlorine slowly; sterilizing before being used up by the pulp. Advantage of using it is the ease of application and distribution to all points in the mill. The points of application in the mill were first determined as the most logical. Adding to the white water pumps, the stock after the grinders and at the mixing systems. Later they were placed near points of the greatest growth and contamination.

All ratios of chlorine to ammonia between 1 to 1 and 7 to 1 were given trials, with a 3 to 1 ratio giving best results. At times, the chlorine usage reached 6½ pounds per ton of news without satisfactory control being obtained. Only places close to the points of application showed decreased growth, and the "tapioca" type of slime growth would flare up, causing a great deal of trouble and paper slime spots.

Failure of control was partly due to the necessity of brightening our western groundwood, which is done by the addition of a reducing bleach. Wherever the addition of these two chemicals overlapped, chemical reaction took place, neutralizing the results of both. Without good slime control being achieved, considerable corrosion and off-color pulp was suffered.

Anhydrous Chlorine & Ammonia. With the thought that the use of anhydrous chlorine and ammonia might be more effective, it was hoped, the more active nature of the chlorine thus applied to small circulating systems, would give a sterilizing residual that would gradually clean up the systems. A circulating pump withdrew pit white water, to which ammonia, then chlorine was added with various controlled pH values. During the trial runs, ratios of chlorine to ammonia varied between 15-1 and 3-1 for several weeks at each. The pH of the circuits was varied between 4.0 and 7.0 by the addition of lime or soda ash in the circuits or through the chlorinator systems. The addition of soda ash tends to darken the pulp at any pH and lime systems are difficult to keep from plugging. Although a good residual was maintained in these circuits and chlorine usage increased to 5 pounds per ton of news, control in the systems as a whole was not attained. For several months the chlorine was added to the white water in the groundwood mills and ahead of the fan pumps with no better results.

At times, low counts and retarded growth occurred only to be followed by periods of increased growth and troubles. After two years of experimenting and adjusting in every practical manner, conditions were only slightly better than with performed chloramine. The high affinity of the groundwood for

chlorine, plus the reaction with the brightening agent made such high dosages necessary that corrosion and color loss stopped the use of chlorine. At present, only the incoming fresh water is chlorinated.

Several eastern mills successfully control slime with chlorine so it should not be said it cannot be used on western groundwood, but under the conditions at our mill it was not possible. The use of an oxidizing type bleach, such as sodium peroxide, might make it possible to go on with the addition of chlorine to obtain good control, sodium peroxide itself being a good agent.

Magnesium Silicofluoride had been one of the best chemicals tested up to this time in the laboratory. A mill run was decided upon although it is very acid and its corrosive nature was known. Our first problem was in feeding the chemical, as metals used in the feeder set-up lasted only a few days. The operators viewed this corrosion with alarm, since our previous trouble with chlorine, and it was decided not to purchase suitable feeding equipment.

To forestall corrosion dosages were kept low and no mill wide test run. It was fed to the groundwood stock for several weeks. The slime count decreased and the nature of the slime growth changed notably. Use was stopped without a complete conclusion being made. Dosages sufficient to sterilize groundwood do lower the pH noticeably so it is quite possible mill corrosion might have resulted. The possibilities of magnesium silicofluoride have not been fully explored, but since neutralization destroys its toxicity, its corrosive nature limits its use.

O-di-chlorobenzene gave good laboratory tests, did not react with the stock extensively and is quite cheap. It has a distinct odor which was hoped would be absorbed by the stock. Quite to the contrary mill application volatilized it a great deal, and we soon had the mill thoroughly fumigated, thus ending the test run.

Temperature was next tried in the groundwood mills and is a very effective though expensive method. Increasing the temperature of the groundwood systems to 125-135 degrees F. by the addition of steam and closing the systems did a very good job of eliminating slime in that department. The steam required prohibits continual use, but it is to be recommended for cleaning up as a starting point for any chemical treatment. One distinct advantage of heat over chemicals for sterilizing a system is in reaching the pockets of colonization that cannot be reached with heavy dosages of most chemicals.

After a period of six weeks, the mills were in very good condition. A slight color loss was noted at this temperature, although some drop can be laid to the closing of the white water systems. Naturally the paper machine end cannot be brought to such temperature and it is unfortunate that enough heat, in most installations, will be carried to the machines to increase the temperature sufficient to accelerate slime growth during the period of cleaning the groundwood departments.

Sodium penta-chlorophenate: Laboratory tests had determined that in general most phenolic compounds, while noted for their low cost and sterilizing efficiency, react so much with groundwood stock that excessive quantities are necessary for mill control. This appeared to be the case in even the heavier molecule phenols. Tests on the paper machines did not show sufficient control to merit its use.

Ethyl mercuric chloride or phosphate have proven to be the most efficient and satisfactory for control. It has been used with good results for the past several years, being added to the paper machines mixing systems and carried through the groundwood mill by the white water system. The mercury compounds were first tested for use as "clean up" agents, but their efficient action against all types of slime-formers and low stock demand brought them into use in spite of their relatively high unit cost. Ethyl mercuric chloride was not used in the pulp for several years after first tested, being used as a "clean-up" spray, until better knowledge of its characteristics were known. At that we were probably the first mill to use a mercury compound as a slime control agent in pulp.

As a sterilizing agent, the pure ethyl mercuric chloride is in a class by itself, due to the extremely low dosages required even in pulp mixtures. To obtain large quantities for mill use, a commercial product was found the most economical. Testing

TABLE III (CONTINUED)

Barium Fluoride				Sodium Fluoride			
P.P.M.	1 Hr. Count	24 Hr. Count		P.P.M.	1 Hr. Count	24 Hr. Count	
0	102,000	1,350,000	Acid	0	114,000	135,000	Slightly Acid No color change
10	66,000	194,000		10	72,000	88,000	
50	87,200	6,600		25	46,000	45,000	
100	19,800	19		50	32,000	49,200	
250	9,720	1		75	30,600	24,600	
500	2,540	0		100	27,600	23,700	
1000	123	0		500	14,600	14,000	
Sodium Perborate			Color loss	2-Chloro-o-phenylphenol			Liquid
0	702,000	5,604,000		0	54,000	304,000	
25	582,000	67,000		25	50,000	380,000	
50	276,000	69,900		50	36,000	394,000	
75	57,600	34,400		75	36,000	300,000	
100	39,000	27,300		100	32,000	285,000	
200	18,300	120		200	23,000	297,000	
				500	16,000	94,000	
2-Hydroxy-6-chlorotoluene			Phenolic Odor No color change	Moldol			Solubility approx. 250 p.p.m.
0	167,400	2,266,000		0	114,000	3,560,000	
10	129,600	234,000		10	102,000	4,080,000	
50	64,800	17,400		50	102,000	2,220,000	
100	35,100	3,600		100	54,000	2,240,000	
250	9,180	170		250	21,000	34,000	
500	170	0		500	3,000	4,100	
1000	3	0		1000	2,400	3,500	
Beta-naphthol			Colonies show inhibition	Bazorite (Sodium Borate)			Alkaline Causes considerable foaming Color drop
0	75,600	1,404,000		0	182,000	1,640,000	
10	64,200	129,000		25	186,000	1,500,000	
50	54,000	178,000		50	204,000	918,000	
100	17,280	118,000		100	159,000	793,000	
250	12,960	560		200	156,000	183,000	
500	1,180	0		500	167,000	24,000	
1000	0	0		1000	151,000	26,000	
Asochloranid			Reacts with bleaching agent to precipitate black copper hydride and copper	Cresone-naphthalene (2-1)			Colonies inhibited
0	310,000	1,086,000		0	65,000	1,500,000	
10	211,000	594,000		25	62,000	1,200,000	
50	102,600	270,000		50	60,000	970,000	
100	27,310	124,000		75	48,000	540,000	
250	4,860	7,560		100	42,000	135,000	
500	1,020	0		200	18,000	50,000	
1000	0	0		500	18,600	52,000	
Copper Sulfate			Specific action	Boric Acid			Dark yellow liquid Decreased foaming to a remarkable degree
0	210,000	1,134,000		0	165,000	2,500,000	
25	2,500	1,300		10	165,000	329,000	
100	1,500	3,200		25	105,000	500,000	
150	500	380		50	109,000	101,000	
200	100	90		100	65,000	24,000	
500	160	13		500	68,400	45,000	
1000	40	0		1000	99,400	68,000	
Formaldehyde			Based on actual concentration of formaldehyde Volatility makes use improbable No color change	Chlorosane			Solubility approx. 500 p.p.m.
0	342,000	973,000		0	118,000	972,000	
25	126,000	4,300		10	102,000	918,000	
50	156,000	9,800		50	61,200	151,200	
75	50,300	5,000		100	29,400	194,400	
100	42,800	160		250	17,800	170,000	
200	15,600	320		500	36,100	85,300	
Copper Naphthenate			Dissolved in ethyl acetate and added Would be difficult to use	1000	22,140	60,100	
0	54,000	648,000		Aluminum Borate			Solid growth
10	18,000	90,000		0	91,000	1,296,000	
25	21,600	16,200		10	59,400	120,000	
50	15,600	12,000		50	57,300	121,000	
75	14,400	16,000		100	32,540	115,400	
100	5,960	2,700		250	38,400	45,100	
Phenyl Mercuric Oleate			Yellow oily liquid Slight brilliance loss	500	22,140	32,940	
0	102,000	756,000		1000	18,680	15,560	
10	66,000	648,000		Cresosol			No action against molds
25	42,000	200,000		0	414,000	Solid	
50	42,000	81,000		50	336,000	"	
75	36,000	41,500		75	250,000	"	
100	7,800	7,000		100	37,600	"	
150	1,800	7,300		200	42,500	"	
Paraformaldehyde (Tri-ox-methylene)			Slight bleaching action	300	23,200	275,400	
0	155,000	630,000		Synthetic Crylite (Sodium Aluminum Fluoride)			Mold growth Acid
10	72,000	360,000		0	270,000	"	
25	66,000	99,000		50	246,000	"	
50	48,000	85,000		75	108,000	"	
75	26,400	97,000		100	124,000	"	
100	20,000	72,000		200	115,000	"	
200	10,200	68,500		500	14,520	"	
Sodium Arsenite			Solubility in stock approx. 50 p.p.m.	1000	12,000	"	
0	25,600	1,782,000		Barium Sulfite			Mold growth
10	71,700	312,000		0	42,000	2,760,000	
25	62,540	123,000		10	15,200	2,000,000	
50	59,800	148,000		20	24,600	"	
75	50,000	37,500		100	14,600	"	
100	23,200	27,000		250	13,000	"	
500	6,480	25,920		500	13,000	"	
				1000	13,000	"	

(FROM TABLE II.)

BEAR BRAND

CHEMICALS FOR THE WESTERN PAPER INDUSTRY

Ammonia
Caustic Soda
Zinc Hydrosulphite
Chlorine
Sulphur Dioxide



DOW

CHEMICALS INDISPENSABLE
TO INDUSTRY AND VICTORY

GREAT WESTERN DIVISION • THE DOW CHEMICAL COMPANY

Seattle

SAN FRANCISCO, CALIFORNIA

Los Angeles

TABLE III (CONTINUED)

Zinc Hydroxysulfite			
p.p.m.	1 Hr. Count	24 Hr. Count	
0	216,000	Solids growth	
5	221,000	"	
10	219,000	"	
25	219,000	"	
50	217,000	"	
75	200,000	"	
100	199,000	"	
Magnesium Fluoride			
0	222,000	1,738,000	
10	185,350	641,000	Solubility approx. 10 p.p.m.
50	165,000	293,000	
100	124,000	131,000	Darkened wood
300	162,000	119,000	
Para Chlorothymol			
0	233,000	1,998,000	
10	24,000	756,000	Noticeable odor
50	16,300	556,000	
100	19,200	318,000	
250	11,340	253,000	
500	7,020	11,800	
1000	2,040	2,340	
Sodium Phenolsulfonate			
0	120,000	2,320,000	
10	96,000	2,210,000	
50	43,000	Solids growth	
100	31,800	"	
250	26,000	"	
500	23,000	"	
1000	26,400	"	
Barium Carbonate			
0	162,600	4,914,000	
50	102,000	310,000	
100	37,000	100,000	
200	29,400	"	
300	24,600	"	
500	10,260	"	

of the chemical has been repeated at intervals, showing no build up in immunity of the organisms. A test made within a few weeks of this writing checked perfectly with one made eight years previously.

It is recognized that it would be inadvisable to add such mercury compounds to pulp going to certain specialties or food containers. In the newsprint, no mercury is detectable, and no injurious or harmful effects have resulted among the operators handling it.

An intermittent flow during the day (24 hours), four days a week, is used. At present a dosage of 0.20 p.p.m. of the active agent (E.M.P.) itself is added during the period of application. This is an average usage for the week of about 0.25-0.30 pounds per ton of news of the commercial product. We do not strive for sterilization even during the periods of application. A point of inhibition sufficient to control the slime growth at a minimum cost is obtained, which prevents growths that would cause trouble and keep wash-ups at a minimum. We still have peak growth seasons at which times an increased dosage is necessary. These periods occur in the spring when the water temperature first starts to rise, and in the late fall when a maximum temperature is reached. An increase of 25 to 50 per cent in the dosage keeps the growth well under control. At publication date usage has been further decreased.

Clean-ups are still necessary on the shut downs. Copper surfaces are often cleaned with dilute sulfuric acid to remove thin slime growths occurring mostly in the corners and joints. Boiling out of pits and chests with soda ash is used. But today the growth is negligible, as compared with the one inch growths over the machines during our "slime period."

Sulphite mill slime has been only a minor problem. Chlorine and ammonia added to the white water system worked very satisfactorily as a good residual can be held in sulphite. However, with the chlorine consumption curtailment our supply for this purpose was stopped. Penta-chlorophenate was used for a time, but while it decreased slime growth it changed to a softer, sluffing off growth which it was felt caused trouble on the machines. Ethylmercuric phosphate in very small dosages was being used with good results at the time of the shut down of this department.

Laboratory Testing of Chemicals

● Along with mill control work all chemicals that could be found with possible toxic value, reasonable cost, and could be obtained commercially, were tested in the laboratory. Due to the large amounts of water and stock handled the chemical must be efficient, cheap and not react with the pulp. The poorer ones were eliminated and the most promising ones tried on mill scale.

A simple testing method of adding standard increasing dosages of the chemical is used, but is different by one very important factor from tests usually published. The chemical is added to a pulp suspension as it will be used in mill application. The point is that a chemical may show a very high toxicity towards any slime organism or group of slime organisms when tested in water or agar, but if the chemical reacts with the stock upon its addition to the mill pulp, the determined toxicity coefficient means very little. This reaction demand may be saturated to a degree but the large volume of stock and the white water loss may make the chemical usage too high if there is a high stock reaction.

By experimenting, it was found that paper machines white water at about 0.3% consistency gave results similar to addition in the mill. The white water is taken during the period of no mill chemical dosage and its chemical demand is probably due to the quantity of fines. To give even tests, it is sometimes necessary to inoculate the white water. Samples are withdrawn from the stock after 1 and 24 hours, plates on agar and incubated 48 to 60 hours at 37 deg. C.

Tables

● Rated, (as determined in our laboratory) according to their efficiency on slime organisms in paper machine white water, the chemicals tested are listed in Tables I and II. Some were quite difficult to rate as other factors, such as cost, solubility and color entered in. Concentrations are based on p.p.m. by weight of liquid. Many additional trade-marked chemicals were tested but for evident reasons are not published.

Table I lists the most efficient and practical of the chemicals and from which, those tried on mill scale were taken. The first two columns give the concentration of chemical necessary to actually sterilize the white water sample. Column three is very pertinent for mill application, as this gives the concentration necessary to prevent growth increase during the period between the 1 and 24 hour samples. For most chemicals in Table I, it may be called the stock demand for that chemical. This can be assumed when in any lower concentrations the addition of the chemical causes a drop the first hour, but followed by an increase by the 24 hour sample. For example, refer to Table III in which actual counts are given. In the case of Lignasan we find that in none of the concentrations, is there any higher counts after 24 hours. However, with sodium pentachlorophenate the 50 p.p.m. concentration count after 24 hours has increased, and at 100 p.p.m. only a slight decrease is noted, so the stock demand must lie between 50 and 100 parts per million. For chemicals giving no decrease in count, the first hour, and increasing by 24 hours, it is assumed the concentration of chemical simply had no toxicity.

Of the first twenty chemicals listed, almost all showing an appreciable stock demand are of the phenol group. The top of the list is mostly composed of mercury, fluoride or phenol compounds. Below the group the concentration is too high to make their usage feasible, excepting those extremely cheap.

Table II is actually a continuance of Table I, but dosages and demand for control puts them too costly to be considered for mill use. They are included for general information. The complete bacteria counts and comments are listed in Table III, and are given because they give a much clearer picture of the action of the chemical. Where several tests were run, the one most average is given.

Miscellaneous Testing

● Due to the extreme seriousness of slime conditions, the policy of the laboratory study was to test all chemicals, methods, or apparatus with any possibilities. Different pH ranges and changing of the pH range through the mill was given considerable study. The change of pH is limited on one side (approximately 4.0) by corrosion and at a point (6.0) where the color starts to drop. Within this range the growth will change



STANDARD ENGINEERS NOTEBOOK

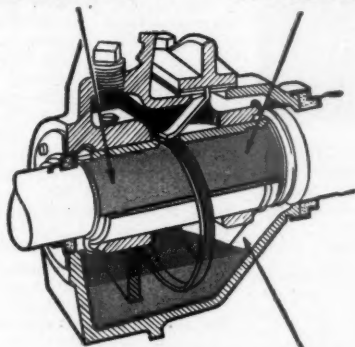
VOL. 1-PA NO. 2

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Calol Multi-Service Oils have successfully solved lubrication problems in many different types of industrial equipment.

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AND EVENLY**

**ADHERES TO
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Calol Multi-Service Oils are sold in four grades: 55X, 65X, 75X and 85X. (Approximately SAE 20, 30, 40 and 50.)

Recommendations for electric motor lubrication

To meet the varying conditions under which electric motors operate and to properly protect the different types of electric motor bearings, Standard of California offers a long list of plant-tested lubricants. The grades of Standard oils recommended for the type bearings found in most electric motors, are in the chart below. Recommendations for other motors may be obtained by writing Standard of California, 225 Bush Street, San Francisco 20, California.

BALL AND ROLLER BEARINGS

OPERATING CONDITIONS	LUBRICANT
Normal operating conditions, speeds high and where housings are oil-tight.	Calol Engine Oil 8 or 10
Ball and Roller Bearings with high end thrust; under low speeds or high temperatures	Calol Turbine Oil 15 or Calol Turbine Oil 19
Ball and Roller Bearings operating under extreme pressure and temperature	Calol Diesel Engine Oil 65 or Calol Deturbo Oil 60

RING OILERS

Low Temperatures	Calol Engine Oil 8
Normal Temperatures	Calol Engine Oil 10
High Temperatures	Calol Turbine Oil 15

WICK OILERS

Bearings	Calol Engine Oil 8 or 10 Calol Turbine Oil 15
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STANDARD OF CALIFORNIA

or adapt itself to any changes made.

Ozone was tried and shows possibilities for certain conditions. Here again, the use of the reducing bleach precludes its use at present. Where no bleach or one such as sodium peroxide is used, it might be used.

A process, wherein silver ions are introduced electrolytically into the stock suspension, was tried. This process works well in comparatively clear water, such as swimming pools, but the groundwood stock evinces too high a demand for its economical use.

Tests were also made on an invention with a "radio-activity" principle, which would destroy the organisms by internal heat generated. But with this and the "sterilamp," also tried, the

presence of the stock rendered them inefficient. A slime preventing paint has not been found although several are advertised.

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Z. J. CHAGNON (left), Assistant Superintendent of the Albany Felt Co., factory at Albany, N. Y., was a guest at a number of Pacific Coast pulp and paper mills in May. With him on his tour was HARRY H. STILWELL (right), Sunset Beach, Union, Wash., who is Pacific Coast representative of the felt company.

Newspapers' Actual Cut In 1944 Has Been 19.1%

● Daily newspapers reporting to the American Newspaper Publishers Association, consumed 201,136 tons of newsprint paper in April, 1944, compared with 243,281 tons in April, 1943, and 256,431 tons in April, 1941. This was a decrease in April, 1944, under April, 1943, of 17.3% and a decrease under April, 1941, of 21.6%.

A general reduction averaging 24% under 1941 figures had been requested by the WPB. Magazines, commercial printers, etc., were asked to make similar reductions of about 25%.

The total estimated newsprint consumption in the U. S. for April, 1944, was 268,181 tons, which includes all kinds of uses of newsprint paper. For the first four months of 1944, consumption was estimated to be 1,040,028 tons.

During the first four months of 1944 the reporting newspapers used 780,021 tons of newsprint, a decrease of 14.8% under the first four months of 1943, and a decrease of 19.1% under the first four months of 1941.

Sales and Inventories

● There was a sharp 10 per cent increase in the March sales over those of February by U. S. wholesalers of paper and paper products. The inventory position continued to show improvement and to confirm indications of betterment.

The index of wholesalers' sales moved from 163.7 in February, 1944, to 182.3 in March. The inventory index on the other hand firmed up for the second consecutive month and showed an increase of 1 per cent. Moving from 91.5 in February to 92.4 in March.

These are indexes prepared by the U. S. Department of Commerce based on an average month in 1940, rated as 100.

New du Pont Executive

Harold Brayman has been appointed director of the public relations department of E. I. du Pont de Nemours and Co., succeeding the late Theodore G. Joslin. Assistant director since 1942, Mr. Brayman was a Washington correspondent and columnist before joining the Company. As a newspaper correspondent, Mr. Brayman enjoyed a wide circle of acquaintance. He was president of the National Press Club in 1938 and of the Gridiron Club in 1941.

N. A. M. Group Tours Crown Zellerbach Mill

● Twenty members of a party organized by the National Association of Manufacturers toured the Crown Zellerbach Corp. mill at Camas, Wash., April 30, accompanied by Vice President Frank N. Youngman of the company.

They were guests at a luncheon at Crown Willamette Inn and were taken to Portland, Ore., by cruiser on the river.

Guests were Robert M. Gaylor, president of the N.A.M. and also president of the Ingersoll Milling Co., Rockford, Ill.; Walter B. Weisenburger, executive vice president, National Association of Manufacturers; Col. Ralph A. Tudor, corps of engineers, U. S. Army, Portland district engineer; Paul B. McKee, president of the Pacific Power & Light Co. and also president of the Portland Gas & Coke Co.; S. M. Fletcher, president of Columbia Empire Products, Inc.; C. W. Morden of Morden Machines Co., Pacific Bldg., Portland; Judge J. A. Emery, general consul, N.A.M.; Kenneth M. R. Merrifield; J. D. Greensward, vice president, Allis-Chalmers Manufacturing Co.; Lawrence Calvert, president, San Juan Fishing & Packing Co., Seattle; and George R. Langlois, manager of the N.A.M., San Francisco.

G. D. Janssen Co. Is Incorporated in New York

● A New York State charter was granted May 17 incorporating the G. D. Janssen Co., Inc., 103 Park Ave., New York City. The new corporation will carry on business of G. D. Janssen Co., long identified with the pulp and paper industry as the builders of the Janssen acid system.

Mr. J. D. Janssen, president of the new company, has been active in the service of the sulphite pulp and paper industry since he first came to this country in 1901 from Norway and served until 1905 in the engineering offices in New York and Maine. From 1905 to 1909 Mr. Janssen served as plant engineer at Koenigsberg, Germany, and at Rosenberg, which was in Hungary at that period. In 1909 Mr. Janssen returned from Europe and assumed activities with Riordon Co. Ltd., at Hawkesbury, Ontario, Canada. In 1916 Mr. Janssen joined with his brother, G. D. Janssen, in G. D. Janssen Co.

As of the present date, there are 89 Janssen tower installations in actively operating sulphite mills on this continent. The new company is planning an expansion of activity and will offer improved acid plants and other process developments as a current and postwar program.

A. H. Lundberg represents the company in the northwest with new offices at 901 Textile Tower, Seattle.

L. A. Colton In Chicago

Louis A. Colton, vice president, Zellerbach Paper Co., San Francisco, attended the annual convention of the National Purchasing Agents Association in Chicago, May 28-31.

Zellerbach Paper Co. division managers held their annual meeting June 5-7 at San Francisco headquarters. A general discussion of postwar plans was held.

Rosmait Joins D. J. Murray

● J. A. Rosmait, since 1920 associated with the paper industry and the past two years on the design of specialized heavy war production machines, on June 1 became associated with D. J. Murray Manufacturing Co., Wausau, Wis.

Mr. Rosmait was born and educated in Milwaukee. His first engineering experience, 1911 to 1913, was in the automotive industry. From 1913 to 1920 he was employed by a large Milwaukee manufacturer, serving as hydraulic design engineer, in the pump and hydraulic turbine departments. In 1920 Mr. Rosmait came to the paper industry—as hydraulic engineer for one of the leading paper manufacturers in Wisconsin. Later he was chief engineer for a large eastern paper manufacturer in charge of all New England and Wisconsin properties, paper mills and bag factories and subsidiaries in the South.

Trade Talk



of Those Who Sell Paper

PMMC Hi-Jinks Is Set for Sept. 29

● At the May 25 dinner meeting of the Paper Mill Men's Club, held at the Los Angeles Athletic club, the membership decided to again stage the annual Hi-Jinks, promoted by the club each year to raise funds for underprivileged children. A. A. Ernst, Los Angeles representative, Everett Pulp & Paper Co. conducted his first meeting as president.

Gerry A. Madigan, Johnson, Carvell & Murphy, was chosen unanimously to serve as general chairman of the Hi-Jinks, set for September 29, at the Riviera Club, near Santa Monica, Calif., scene of the affair last year. Mr. Madigan has served in various capacities in the promotion of the annual affair for the past 10 years.

Paper Co. Collects 10 Tons of Waste Paper

● In these days of paper shortages a paper house might be the last place where people would think of finding large quantities of waste paper, but when the Zellerbach Paper Co., San Francisco, got through looking for waste paper, 10 tons of waste paper for the war effort had been netted. The drive was organized by Walker Shephard, operating manager.

Some benefits derived by the company: 1. Twelve large steel filing cabinets were emptied of old records. 2. The company was able to clear an entire mezzanine floor of records. 3. The company's personnel had a chance to review the company's forms.

Bonestell Men Die In Service

Death has laid a heavy hand on young men who formerly operated the Kardex system at Bonestell & Co., San Francisco. Three of them, all aviators, have been reported missing or killed.

Wm. F. "Billy" Kahn, 26, bombardier on a B-24, and second lieutenant, was reported missing in action July 10, 1943. Second Lieutenant David V. Weber, 22, a P-38 pilot was killed in Italy, April 10, 1944. Second Lieutenant Johnny Perrine, 25, pilot of a Flying Fortress, was killed over France, in December, 1943.

P. C. Paper Co. Ex-Manager

Seven months from being manager of the wrapping and fruit paper department of the Pacific Coast Paper Co., San Francisco, to being a patient seriously wounded in an Army hospital in Fresno, was the quick trip made by James H. "Jimmy" Hooker.

About seven months ago Jimmy donned the uniform of an Army private, and before he hardly knew it, he was on the Anzio beachhead. Now he's a patient at Hammond General Hospital, Fresno, Calif., seriously wounded but on the road to recovery.

Ernst Is New President of Men's Club



NEW OFFICERS OF THE PAPER MILL MEN'S CLUB OF SOUTHERN CALIFORNIA (left to right): ANSEL A. ERNST, President; GARRY THIEM, Vice President; J. W. GENUIT, Secretary, and NEWBEY A. GREEN, Treasurer.

● Ansel A. Ernst, Everett Pulp & Paper Co., is the new president of the Paper Mill Men's Club of Southern California, succeeding J. Dwight Tudor, Fibreboard Products Inc.

Gerry A. Thiem, Milwaukee Lace Paper Co., has stepped up from the secretaryship to be vice president, while former treasurer J. W. Genuit, Fenstrom Paper Mills, Pomona, became secretary.

The only competition at the election meeting, held April 17 in the Los Angeles Athletic Club, was for treasurer. In a close race, Newbey A. Green, Crown Willamette Paper Co., nosed out G. N. Madigan, Johnson, Carvell & Murphy by two votes. Board of directors to serve during the 1944-5 term are past presidents: Mr. Tudor; Paul Rabb, Lily Tulip Cup Corp.; Lester E. Remmers, A. C. Hentschel, Johnson, Carvell & Murphy.

For the first time during his administration. Retiring President Tudor was unavoidably absent, and Vice President Ernst conducted the meeting in his stead, naming Neil B. Sinclair, Sinclair-Lang Co., presiding officer over the election. Forty-eight attended.

An enthusiastic response was given to Mr. Remmers' call for a vote of thanks to the retiring president for a splendid year of achievement.

Among those present were, in addition to those mentioned above:

G. E. Wieman, Western Waxed Paper Co.; F. G. Amberg, Angeles Paper Excelsior Co.; H. E. Gibson, Capital Envelope Co.; S. R. Whiting, Inland Empire Paper Co.; L. H. White, Oregon Pulp & Paper Co.; Arthur E. Carlson, Pioneer-Flinkote Co.; George F. Skleba, Dixie-Vortex Co.; Marvin Vanderheiden, Nekoosa-Edwards Paper Co.; Shearman G. Gue, Silkin Paper Co.; H. L. Fields, National Paper Products Sales Co.; Louis Wanka, S. G. Wilson Co.; Irvin Damon, Northern Paper Mills; Verner Moore, Dixie-Vortex Co.; Frank R. Philbrook, Graham Paper Co.; Elmer C. Thomas, A. D. Morse & Co.; Willard Taylor, Graham Paper Co.; T. E. Bruffy, The

Dobeckmun Co.; Paul A. May, Pomona Paper Products Co.; Edward N. Smith, Edw. N. Smith Paper Co.; L. C. Harden, Comfort Paper Corp.; J. M. Sholl Lewis, Paper Container Mfg., Co.; W. A. McBride, Louis T. Mork, U. S. Envelope Co.; Lou Levine, Lily Tulip Cup Corp.; F. R. Schroder, Sealright Pacific Ltd.; J. E. Garner, Universal Paper Co.; G. S. Brenzel, L. A. Paper Bag Co.; Russell F. Attridge, Johnson, Carvell & Murphy.



KING WILKIN, Assistant to HAROLD ZELLERBACH, President, has been named General Sales Manager in charge of Sales Personnel and Training for the Zellerbach Paper Co.

Mr. WILKIN, in addition to his other duties, has been making a detailed study of problems that will confront salesmen in the postwar era and also is interested in rehabilitation and educational work for service men.

Acid Making In the Sulphite Pulp Industry

By A. H. LUNDBERG*

CHAPTER III -- Continued

EVER since sulphite pulp was produced on a commercial scale, the presence of a sulphite pulp mill in a locality has been easily recognized by the peculiar odor emanating from same. The "quick cook" method or sulphite cooking is generally in use in this country. Same involves blowing of the digester content into a blow pit from which the obnoxious gases, mostly sulphur dioxide and vapor, are evacuated to the atmosphere through the vomit stack. The adoption of stronger and stronger cooking acids has aggravated this nuisance condition to such an extent that the pulp mills are today faced with the necessity of removing this condition.

Several systems have been developed—all based on recovery of the SO_2 gas now lost to the atmosphere; some also incorporate heat recovery.

The handling of the recovered SO_2 gas varies, but ultimately the gas is introduced into the acid system and thus becomes a part of acid making.

*Seattle, Washington. Mr. Lundberg is Western Manager, G. D. Jenssen Company, New York City.

I. Amount of SO_2 Gas Available

The SO_2 left in the spent liquor at the time of blowing is not a fixed amount. It varies in the different mills, depending on cooking conditions, quality of pulp produced, etc.

One method¹³ used for estimating the sulphur dioxide for recovery at the end of the cook is to run a sample of the liquor (just before blowing) through a stainless steel cooler. The cooled liquor is titrated with iodine. Another sample of the liquor is flashed, cooled, and titrated. The difference between the two readings is accepted as the sulphur dioxide available for recovery.

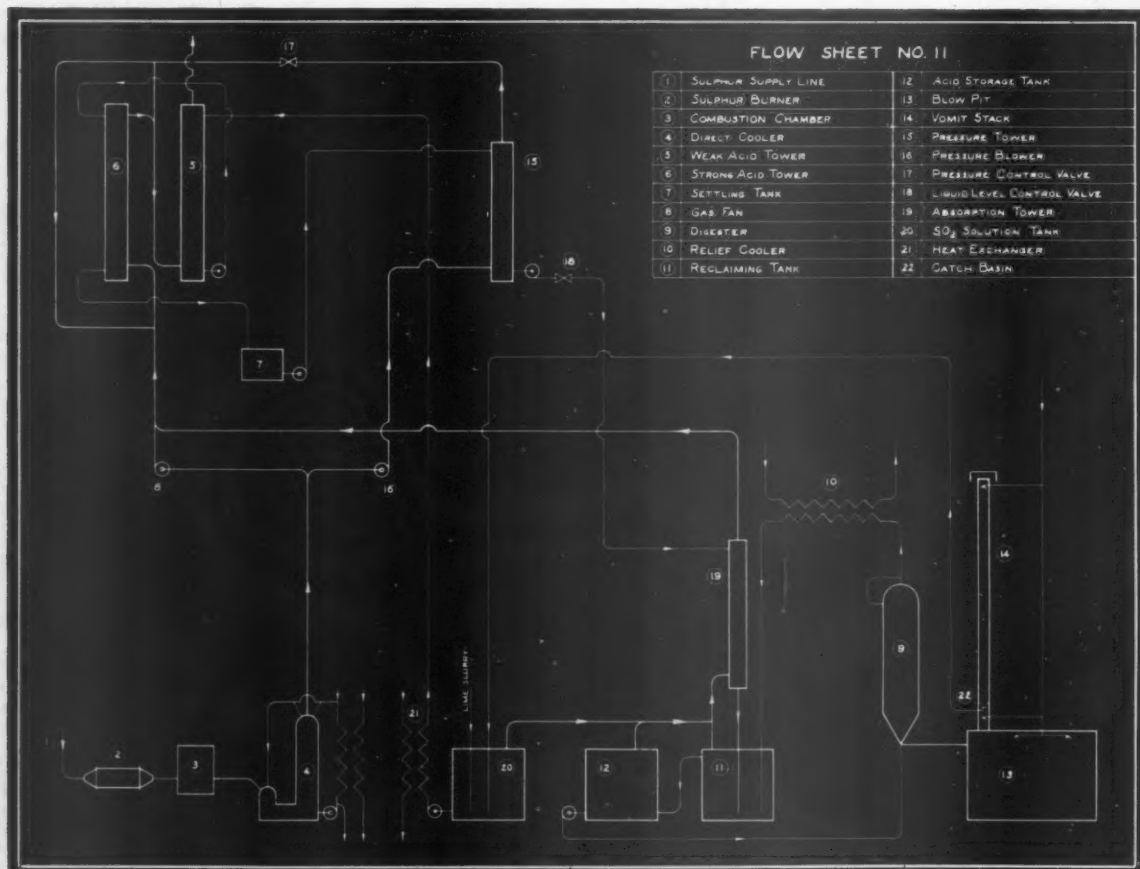
There are approximately 18,000 to 20,000 lbs. of waste sulphite liquor per ton of pulp; thus, if following test is found

Blow test—0.60% SO_2

Test after flashing—0.06% SO_2

then the SO_2 available for recovery is $(0.0060 - 0.0006) \times 20,000 = 108$ lbs. of SO_2 , or 54 lbs. of sulphur per ton of pulp.

A blow test of 1.00% SO_2 and even higher is prac-



ticed in some mills. The test after flashing depends on the temperature of the liquor at the time of blowing, but will usually range between 0.08% and 0.05%.

Mr. Felthouse points out that with a liquor test at the blow as follows: 1.12% Total—0.16% Comb.—0.80% True Free SO₂, the total SO₂ discharged to the blow is equal to:

$$31,250 \times 8.33 \times 0.0112 \text{ or } 2,920 \text{ lbs. SO}_2$$

(31,250 = total gallons of liquor to blow pit from a 15 A.D. tons digester)

However, the theoretically recoverable SO₂ is the "True Free" which will be evolved from the liquor and stock in the pit, and in this case

$$31,250 \times 8.33 \times 0.0080 = 2,092 \text{ lbs. SO}_2, \text{ or } 140 \text{ lbs. SO}_2 \text{ per ton A.D. pulp.}$$

To accurately determine the combined SO₂ in the waste liquor is, however, difficult on account of the organic substances present. The flash test should give fairly reliable results.

From the foregoing, it is safe to assume that the available recoverable SO₂ in most mills will correspond to about 50 lbs. of sulphur per ton of pulp.

II. Amount of Heat Available

The amount of available heat is also a variable. Some mills blow at higher pressures than others. The temperature of the discharged mass is, of course, the deciding factor.

Assuming that there is 20,000 lbs. of liquor per ton of pulp and that its temperature at time of blowing is 275°F (135°C), then the available heat corresponds to

$$20,000 \times (275 - 212) + 2,000 \times 0.32 \times (275 - 212) = 1,300,000 \text{ BTU or approximately } 1,300 \text{ lbs. of steam per ton of pulp.}$$

0.32 is the assumed specific heat of pulp.

III. Recovery Systems In Use

As the blowing time usually is 10 to 20 minutes, depending on the size of the digesters, blow pipes, etc., and idle time between blows is dependent upon the number of digesters and their spacing time, the difficulties encountered in handling the vast quantities of steam and gas within the limited time and intermittently are understandable.

The principal methods in use are:

1. Cooling and immediate absorption of the SO₂ in same cooling water.
2. Condensing of the steam and subsequent absorption of the SO₂ gas in separate absorption media.

The main difference between the systems lies in the method of cooling or condensing. In the first method a sufficiently large amount of water is used, not only to condense the steam, but to bring the temperature of the water mixture to a point where the SO₂ can be absorbed.

In the second method only sufficient water is used to condense the steam leaving a water mixture of approximately boiling temperature, at which temperature SO₂ is practically insoluble at atmospheric pressure. The SO₂ gas is withdrawn, cooled, and absorbed in a separate apparatus either in water or in the raw acid.

IV. COOLING AND IMMEDIATE ABSORPTION

The cooling and absorption is performed in the vomit stack, a relatively large empty tower through which the gases pass to the atmosphere. Water is introduced through nozzles at various points. A spray tower, as mentioned under paragraph VII, Chapter II, is not a very efficient absorption apparatus. In this case, how-

ever, it has to be used as any large degree of packing would interfere with the gas flow. In the lower part of the stack is a catch basin from which the SO₂ solution flows to a storage tank.

The cooling and absorption operation is, of necessity, an intermittent procedure performed only during the blowing. From the storage tank on, the operation and utilization of the SO₂ becomes continuous.

There are two different ways to utilize the SO₂ solution.

1. It can be neutralized and cooled, and used as make-up water for the raw acid.
2. It can be stripped of its SO₂ content in a manner identical to the one outlined under Flow Sheet No. 7, Chapter II.

CALCULATIONS

Data:

Digester size	15 tons
Fresh water temperature	68°F
SO ₂ solution	104°F
Blowing time	15 minutes
Recoverable SO ₂ per ton	100 lbs.
Recoverable Steam per ton	1,300 lbs.

If the digester content is blown on a dry blow pit bottom and all water is added at the top of the stack and collected, then the acid solution will be very weak as water required is

$$X(68 - 32) + (1300 \times 15 \times 1150) = [(1300 \times 15) + X](104 - 32) \text{ or } 583,000 \text{ lbs. Total SO}_2 \text{ is: } 100 \times 15 = 1,500 \text{ lbs., and SO}_2 \text{ solution holds } 0.26\% \text{ SO}_2.$$

The installations in use, however, usually blow into a flooded blow pit bottom and distribute the water in such a manner that a solution holding about 0.6% to 0.8% SO₂ at 40°C is produced. The recovery efficiency, however, drops so that one system, checked and fully described by D. G. Felthouse in his paper, "SO₂ Recovery from Sulphite Vomit Stacks,"¹⁴ showed about 50% of the recoverable sulphur remaining with the blow pit liquor. However, he shows an absorption of about 95% of the SO₂ going to the stack, and an over-all recovery of 33 lbs. of sulphur per ton A.D. slush pulp.

Assuming the storage tank now holds 0.6% SO₂ solution and a volume corresponding to the acid plant make-up water demand, the question arises what to do with such a solution. It cannot be used directly for make-up water in the acid plant.

The temperature is too high. Even if cooled down to 15°C, which in many places is impossible during the summer months, its vapor pressure is too high for use on the weak tower. According to Table XVII, the solution has a vapor pressure corresponding to an SO₂ gas of about 4.5% at 15°C. As the burner gases, by the time they reach the top of the weak tower, have practically exhausted their SO₂ content, the solution will be entirely stripped. Mr. Felthouse points out: "After putting the system into use, it was found that the vapor pressure of the SO₂ in the recovered acid as introduced into the top of the weak tower was greater than that in the spent burner gas at that point which resulted in stripping the recovered acid of SO₂ with an increase in Jenssen Tower losses. On adding to each blow what was deemed an economically practicable amount of lime slurry, the tower loss dropped from 3,000 lbs. to 700 lbs. of sulphur per day." In other words, it was necessary to add lime to the solution to form a calcium bisulphite and thereby reduce the vapor pressure of the solution. See Flow Sheet No. 11.

As a calcium bisulphite does not exist without a certain percentage of free sulphurous acid, the solution

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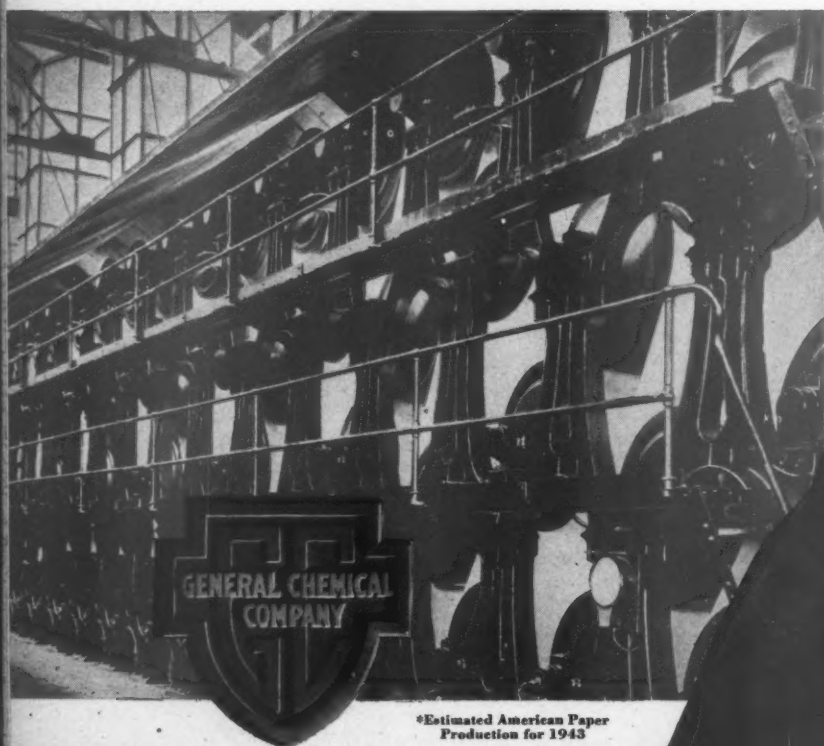
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Production for 1943



still has a vapor pressure too high for the spent burner gases, with the result that the stone tower loss still is five times higher than it was previous to the use of recovered acid. In spite of same, the net pounds sulphur recovered per ton A. D. pulp slush is 30.7 lbs.

For better utilization of the recovered gas in the SO_2 solution, another West Coast mill installed a stripper system. See Flow Sheet No. 12.

With this arrangement it is possible to send the stripped 100% gas (dry basis) either to the burner gas line or to the absorption tower, thereby getting a certain beneficial control and flexibility of the acid making plant, and elimination of the stone tower losses.

Operating procedure is as follows: After digester blow valve is opened, start blow pit and vomit stack showers so regulated that highest concentration SO_2 solution is obtained at highest recovery efficiency. The SO_2 solution flows by gravity to tank (Item 20). From this tank the solution is continuously pumped at a constant rate of flow to stripper (Item 17). The gas leaving the stripper can either be sent through Valve A back to the acid plant or through Valve B to the absorption tower (Item 16). Thus, the recovered gas can be utilized either for acid making or for strengthening the Free SO_2 in the raw acid.

¹²Swartz, J. N. "Sulphite Blow Heat and Gas Recovery," Canadian Pulp & Paper Assn., Jan. 27-29, 1943.

¹⁴Pacific PULP & PAPER INDUSTRY, Oct. 1941.

Mr. Lundberg's articles have developed wide interest in the U. S. and Canada. In response to numerous inquiries, it may be stated that book-form publication is planned next year.

Agreement Terms For Operation And Sale of New Alcohol Plant

● Here are the terms under which the Puget Sound Pulp & Timber Co., will operate the new million dollar alcohol plant now being built at Bellingham, Wash., according to Fred G. Stevenot, president of the company:

The plant is built with funds from the U. S. Defense Plant Corp., a government agency. Contract calls for leasing the plant from the DPC for a period of five years with provisions for extension of two additional years, to February, 1951.

Rentals consist of payment of $13\frac{1}{2}$ cents a gallon of alcohol sold until the Defense Plant Corporation has been repaid its investment, plus interest at the rate of 4 per cent. Thereafter rentals will be reduced to 7.4 cents per gallon.

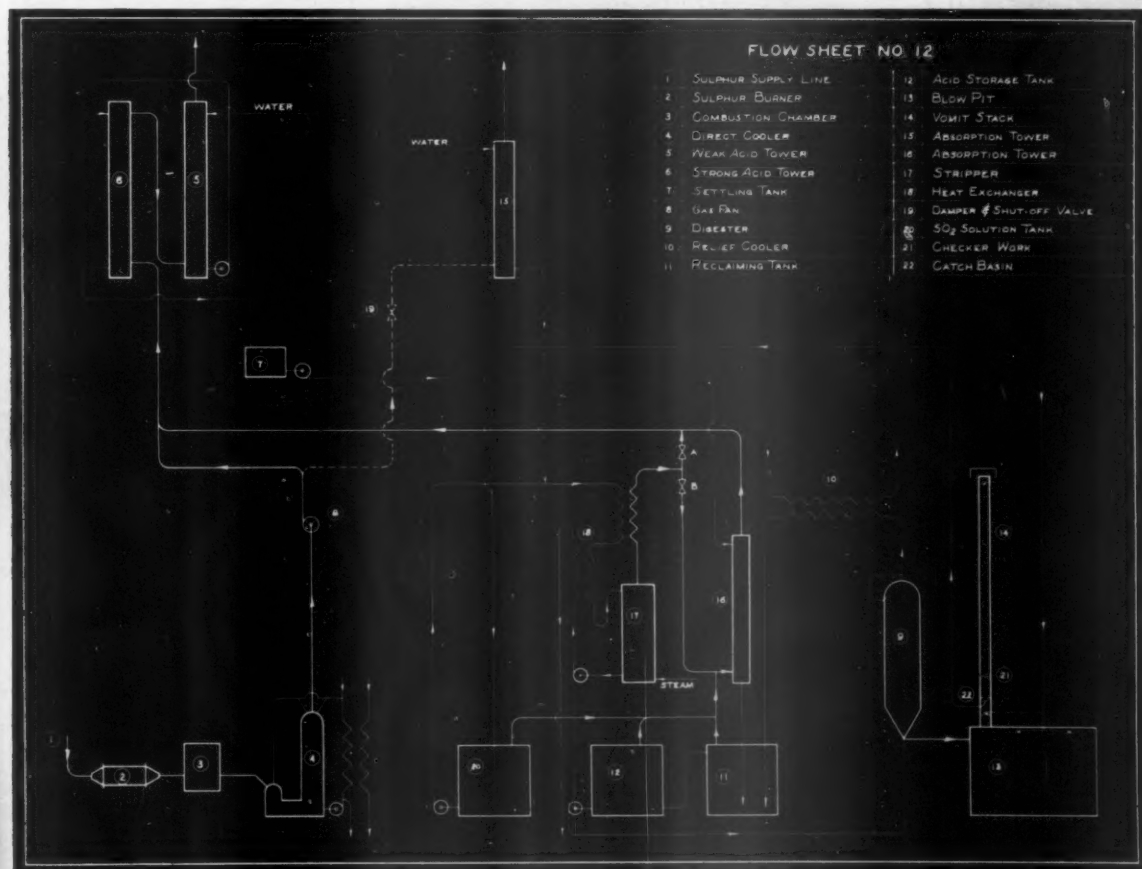
In addition to furnishing the site, Puget Sound supplies the sulphite liquor, other materials and facilities, and manages manufacturing operations.

Sales price of the alcohol will include cost of production, the rental fee of $13\frac{1}{2}$ cents (or 7.4 cents) per gallon, plus a reasonable profit to Puget Sound for management, the latter to be determined at a later date. Daily production should exceed 5,000 gallons.

Contract for the purchase of the alcohol output will be negotiated with some government agency to be determined by the DPC shortly before completion of the plant.

Under the terms of the contract, Puget Sound may purchase the plant at a minimum of 15 per cent of cost of construction and equipment, after the DPC has been repaid its investment, in lieu of the rental paid on a gallonage basis—the terms of purchase being subject to negotiations.

The plant is being constructed by Howard H. Wright & Co. of Seattle and the equipment supplied by the Vulcan Copper and Supply Company of Cincinnati.



Parsons & Whittemore Sold to Lyddon & Co.

● Howard Whittemore announced that the controlling interest of Parsons & Whittemore, Inc., has been sold by the Whittemore family to Messrs. Lyddon & Company. The organization will not undergo any change. Mr. Whittemore remains with the company as president and chairman of the board.

Of Lyddon & Company, Messrs. Joseph E. Lyddon, Karl F. Landegger and Robert Grant join the board of directors.

Mr. William Flohr, vice president, remains in charge of the pulp department. Mr. J. H. Newman, vice president, continues to handle all paper exports. The domestic paper department and the general exports will continue as before. Mr. Eli deVries and Mr. Edward R. Southouse desired to resign from the firm but

their collaboration is available.

Mr. Karl F. Landegger has been appointed executive vice president.

Lyddon & Company of New York and London are an old and well-known pulp house who will lend all possible support to the firm.

Make 30-Lb. Newsprint

● Both British Columbia newsprint producers—Powell River Co., and Pacific Mills, Ltd., shared in the "experimental" production of 30 pound paper authorized by the Canadian government and it is probable that they will continue to manufacture the lighter weight newsprint on a more permanent basis, even though consumers can expect little if any benefit in the form of increased yardage of paper delivered this year.

During June, about 70 per cent of Pacific Mills' newsprint output was in

30-pound paper, and Powell River Co.'s proportion was about 32 per cent.



L. W. LAWRENCE whose appointment as Sales Representative of Bulkley, Duntun Pulp Company, with headquarters at 80 East Jackson Blvd., Chicago, has been announced by FRED ENDERS, President.

Mr. Lawrence will work with Milton Bailey of Kalamazoo, Mich., in covering the territory that comprises Wisconsin, Illinois, Michigan, Indiana and Minnesota. Mr. Lawrence was for 20 years sales representative of the Schlaffer Supply Company, Appleton, Wis., where he gained wide experience and established many contacts in the paper industry. Born and educated in Green Bay, Wis., Mr. Lawrence has spent his entire adult life in the mill supply business.



REX VINCENT of the Technical Staff of Buckley, Duntun Pulp Co., who has moved from the company's Chicago office to New York headquarters (295 Madison Ave.) Mr. Vincent has been doing extensive research on purified and dissolving pulps. A chemical engineer, graduate of the University of Cincinnati, he joined Bulkley, Duntun in 1937.

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Training For Women By Elwell-Parker



● Broad possibilities of further relief to the problem of manpower shortage are forecast in the extended campaign being conducted by The Elwell-Parker Electric Co., Cleveland, O., to train women in the operation of power industrial

trucks.

A survey of 800 industrial executives two or three years ago revealed that more than half of them were interested in employing women to replace the men who were operating their industrial trucks. Elwell-Parker made this transition easy by preparing an instruction folder, "Lady, Will You Give a Lift?" to help customers to train women operators. This manual explained to the new operator the importance of her job and told her in non-technical language how to operate her truck and to take care of it.

The observed effect of this project was a sharp reduction in the time required for the average woman employee to learn to operate her truck properly and with confidence. With the help of the manual women can be taught to drive an industrial truck in one day, instead of the four or five days often consumed in hit-or-miss instruction.

Fred Reynolds Discusses Rubber

● Fred Reynolds, chief chemist, Anacortes, Wash., division of Coos Bay Pulp Corp., subsidiary of Scott Paper Co., discussed synthetic rubber production at a Rotary meeting in Anacortes, May 4.

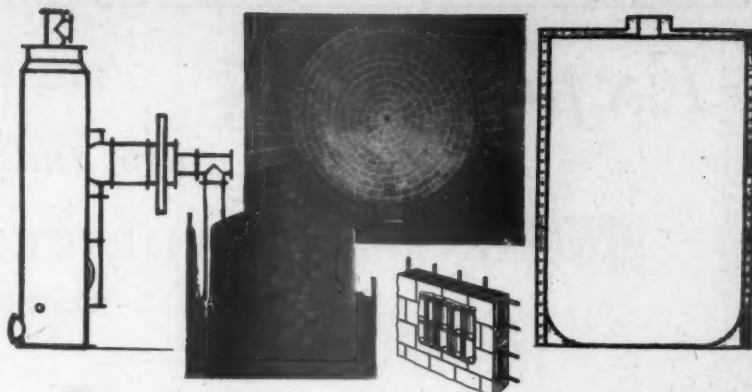
Synthetic rubber is not an innovation, he said, having been started in 1828. While research and experiments have continued through the years in England, France, Russia, Germany and the United States, on the whole, as yet, he said, it is a story of only partial success.

He listed the types of synthetic rubber, the materials used for making butadiene, one of the basic materials; said there were twelve basic types of rubber, although fifty had been made and called synthetic.

He compared the prices on synthetic rubber with natural rubber, the former having sold from 33 to 45 cents per pound, while natural rubber had sold as low as 3 cents per pound, and had gone up to \$1.15.

Coos Bay Corp. Is Tops

A recently announced top ratio for payroll savings participation in the 4th war loan among industrial firms in Coos Bay County, Oregon, was established by Coos Bay Pulp Corp. Cash purchases by the 125 employees totaled \$8,177, or 30 per cent more than the quota of \$6,000. Five thousand three hundred thirty dollars of the purchases were made through payroll deductions. Lester Sprogis was the plant committee chairman.



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NEWS OF

The Pacific Pulp & Paper Industry--

15 Years Ago

New Pacific Section of TAPPI organized June 22, 1929, at the New Washington Hotel, Seattle. C. R. P. Cash, Cascade Paper Co., Tacoma, was elected the first chairman. R. M. DeCew, Fibreboard Products Inc., Sumner, Wash., was elected vice chairman; Dr. H. K. Benson, University of Washington, secretary, and A. H. Hooker, Jr., Hooker Electrochemical Company, Tacoma, membership chairman.

A fourth digester was added at Shelton, Wash., bleached sulphite mill, then owned by Rainier Pulp & Paper Co. (now Rayonier Incorporated).

10 Years Ago

About 100 attended the Pacific Coast pulp and paper mill superintendents convention in Portland, Ore., June 1 and 2, 1934. Bob Heuer was chairman of the Pacific division of the superintendents.

An NRA code for the pulpwood industry was proposed to the government in Washington, D. C., by the American Pulpwood Association. Don Denman, of Crown Wilmamette Paper Co., Seattle, and Donald Lyle, of Hoquiam, Wash., spoke in favor of the proposed code.

E. L. Buckley and Oliver Besner, of Vancouver, B. C., indicated a new pulp mill was definitely to be built at Prince Rupert, B. C.

A new wood mill was begun for Washington Pulp & Paper Corp., Port Angeles, Wash., and another digester was added by Grays Harbor Pulp & Paper Co., Hoquiam, Wash.

Calco Chemical Manager

● The Calco Chemical Division of the American Cyanamid Company has named Sam Klein the organization's western sales manager; headquarters, Chicago.

Employed in the dyestuff industry since 1907, Mr. Klein was with A. Klipstein & Co., and Read Holliday & Sons before joining Calco in 1917. For the past 20 years he has been in charge of Calco's Lake department.

Westinghouse Engineer

A. T. Hutchinson, for the past 19 years attached to the Westinghouse Electric Supply company offices in Seattle, Wash., and Portland, Ore., has been appointed application engineer at the Portland, Ore., office of the Westinghouse Electric & Manufacturing Co.

In his new position, Mr. Hutchinson will serve the company's central station and industrial customers in the Portland area.

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Production Manager

● Roland Wilber, pulp mill superintendent of Ecusta Paper Corp., Pisgah Forest, N. C., since 1939, has been appointed to the position of production manager of Crossett Paper Mills, Crossett, Ark.

R. C. Bullock succeeded Mr. Wilber as superintendent at Ecusta Corp.

Westinghouse Offers Electronics Course

● A practical training course on electronics is available to industrial groups according to H. S. Schuler, application data manager, Pacific Coast district, Westinghouse Electric & Manufacturing Co. This course, compiled by Westinghouse engineers, presents in a clear understandable manner the basic principles and applications of electronics.

To supplement ten lesson books printed in handy pocket size, a series of slide films and records will be provided. The complete course, containing materials for a class of twenty-five persons is available at cost, Mr. Schuler stated.

For information on this course, Mr. Schuler suggests interested companies write him at 1 Montgomery St., San Francisco 4.

Plastics Meeting In Seattle Set For July 13

● The management and technical men in the western pulp and paper industry are invited to participate in a meeting in Seattle on July 13 to discuss future possibilities of using plastic materials with wood and wood pulp.

The meeting is sponsored by the Pacific Coast section of the Society of the Plastics Industry and the Douglas Fir Plywood Association. The program includes a talk by T. S. Carswell, head of Monsanto Co.'s plastics division. It is probable the meeting will be in the Seattle Chamber of Commerce Bldg., but later definite word can be obtained from A. J. Norton, consulting chemist, 2919 1st Ave. So., Seattle.



Pulp & Paper Trading Co. Elects Officers

Morris Gintzler was elected president and treasurer at a meeting of the directors of the Pulp & Paper Trading Co., 21 East 40th, New York 16, on May 18. Others elected: O. Frederick Swanson, vice president in charge of the pulp division; Frank E. Forsbrey, vice president in charge of the paper division; Jordan S. Tucker, secretary and assistant treasurer, and Joseph L. Fox, assistant vice president and assistant secretary.

Kerns and Machine Room Top Longfibre League

● Competition in the Longfibre Bowling League of Longview Fibre Co., Longview, Wash., ended April 7 for the season, with standings of teams as follows:

	Won	Lost	Pctge.
Machine Room	39	17	.696
Supervisors	34	22	.607
Finishing Room	32	24	.571
Pipe Fitters	30	26	.536
Box Plant	28	28	.500
Mechanics	24	32	.434
Pulp Mill	19	37	.339
High team game, bag plant			1058
High team series, machine room			3011
High single game, Mr. Kerns			278
High single series, Mr. McDaniels			721

Mr. Kerns, machine room, topped competitors with an individual average score of 190 for the season. A dinner for all bowlers was held April 20 at the Elks Temple, at which Bill Clarke was elected president of the league, and C. G. Ditter, secretary-treasurer.

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